CAUSES OF DISABILITY

AS APPLIED UNDER

ACCIDENT AND HEALTH INSURANCE POLICIES

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ACCIDENT AND HEALTH INSURANCE POLICIES

WITH SPECIAL CHAPTERS ON

POLICY FORMS, ADVANTAGES OF EXAMINING FOR ACCIDENT INSURANCE COMPANIES, NECESSARY QUALIFICATIONS FOR SUCCESSFUL EXAMINERS, METHOD OF MAKING EXAMINATIONS, ADJUSTING CLAIMS AND MANNER OF SECURING APPOINTMENTS AS EXAMINERS FOR INSURANCE COMPANIES

Designed for the Use of Insurance and Fraternal Examiners, General Practitioners and Students of Medicine, Attorneys and Corporations

BY

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TO MY

DEAR FATHER AND MOTHER

THIS VOLUME IS AFFECTIONATELY

DEDICATED WITH LOVE AND ESTEEM BY

THE AUTHOR

PREFACE

The casualty insurance business as exemplified by the issuing of policies providing indemnity against disability resulting from accidents and diseases is acknowledged by experts as the form of insurance which will in time far surpass all other kinds. Already an enormous number of accident and health policies are being written annually by many reliable and well managed casualty insurance companies on wage earners who know by precept or experience the value of such insurance.

Practically every man desires to leave his family provided for in case of unexpected death, and it is absolutely necessary for honorable men to provide for them during life. This can be done in a more or less satisfactory manner as long as the head of the household is able to work. When accident or illness causes a temporary or permanent period of disability, the income usually ceases at once unless the individual has protected that income with an accident or health policy, and as a large number of men are now carrying such policies, an already vast amount of examining for casualty insurance companies by physicians and surgeons is being done every day, but nothing in comparison to the number of examinations that will be necessary within the next few years. For this class of work which is now required and which will enormously increase in the coming years, it behooves medical men to prepare themselves to render proper services to the company they represent, the claimant and themselves, thereby improving their social standing and materially increasing their income.

It is a well recognized fact that nothing can be done well without instruction and experience, the greater the knowledge of any special line of work possessed by a doctor the larger the amount of success will he acquire in his chosen vocation. Years of experience have shown the great need that exists among doctors for a book giving information concerning accident and health insurance examinations. It hardly seems possible, nevertheless

it is true, that the majority of American physicians are not familiar with the demands which are now existing for medical examinations and reports from casualty insurance companies. As the medical profession has never had a book on accident and health insurance for instruction and advice, this book was undertaken and is now given to those concerned in this great field with the hope that whatever is contained therein will prove of interest and value.

The author takes this opportunity of extending sincere thanks to many who have contributed suggestions and advice, and especially is he indebted to Mr. John Guy Monihan, President of the Monihan Company; Mr. R. W. Greene, Vice President of the W. B. Saunders Company; Mr. A. H. Lea, of Lea & Febiger, and Mr. Milton Campbell, President of the H. K. Mulford Company for many courtesies granted during the actual preparation of the book. For the splendid index with which this volume is equipped special mention is due my secretary, Miss Florence E. Tunney, whose services have been invaluable in many ways.

C. H. H.

1143 South Broad Street,
Philadelphia, Pa.

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CAUSES OF DISABILITY

CHAPTER I

ADVANTAGES OF MAKING ACCIDENT, HEALTH AND LIABILITY INSURANCE EXAMINATIONS

Physicians throughout the United States are almost without exception anxious to make examinations for life insurance companies and take every opportunity of securing appointments for the purpose of doing this class of work which is remunerative and at the same time can be done in conjunction with other professional duties. Doctors who examine for these companies know that in making a life examination, the appointment is usually made by the agent and the examiner is expected to keep it, irrespective of any inconvenience it may cause to himself or to his patients. They also know that an agent expects every risk to be recommended for acceptance and if not accepted by the home office, the examining physician is blamed for not passing the individual; the agent becomes very angry and if there is another examiner in the same locality, the doctor who has aroused ill feelings on the part of the agent simply because he has done his duty, is side-tracked and another physician is secured who perhaps will not be so conscientious in his work and efforts to protect the company. Yet with all these drawbacks and many others, physicians strive in every way possible to become examiners for life insurance companies and after getting an appointment continue to use every effort to secure examinations from agents. The great majority of doctors are not familiar with the demands for examinations by accident insurance companies and seem to think that the work is not as remunerative as that furnished by a life company. In this they are very much mistaken and many reasons

can be advanced to show that examining for accident insurance companies is preferable in almost every way to examining for life insurance companies.

DEMAND FOR EXAMINATIONS: Accident, health and liability insurance as sold to-day has been developed practically into its present proportions in the past fifteen years, and as this kind of insurance pays indemnity for disability due to an accident or disease, insurance companies doing this class of business are obliged to have medical examinations of individuals who have sustained an accidental injury or have suffered from an illness. This demand for examinations dates from the beginning of accident and health insurance and is being increased every day on account of the greater number of persons carrying this form of insurance, and as the number of policies increase so also do the number of accidents and illnesses; consequently, the necessity for examinations by medical men is daily growing larger and this demand will continue for years to come, as every insurance company will enlarge its business, some by spurts, others by gradual extension, but whichever way of extending the business prevails, the necessity of having reports from medical men will be constantly on the increase.

The number of examinations will also be increased on account of the developments of the more rapid forms of transportation which are now not confined as formerly to the large cities, but may also be found in the smaller towns and even extending between towns and villages. The electric trolley, together with the large number of automobiles that are being operated throughout the country, tends to greatly increase the number of accidents; and as these accidents are the most complicated ones for insurance companies, the demand for competent medical examiners is greater. It is therefore very important that physicians prepare themselves to handle this class of work in a satisfactory manner and thereby increase their value, not only to the community at large, but also to themselves.

TIME OF EXAMINATION: In examining for an accident insurance company, a physician is usually not requested to make the examination until after the individual suffers from an accident or illness, and at this time the doctor knows positively that the claimant is either totally or partially disabled. If totally disabled, he is almost invariably confined to the house and can be seen at the convenience of the physician. If partially disabled, he is gene-

rally attending to the inside duties of his occupation and therefore can be found at his place of business and at a time which is convenient and suitable to the examiner for making the examination. As is well known in life insurance examinations, the doctor has to make the examination at a time convenient to the applicant or agent, the time of the doctor not being considered of any value whatever, and in many of these cases several visits are necessary before the examination can be made. Examinations for accident insurance companies can be made during the day in conjunction with other visits of the physician; thereby requiring less time and trouble than if the examination was for a life applicant.

URINARY AND MICROSCOPIC EXAMINATIONS: An accident examination rarely requires a urinary analysis, while, as is well known, this is almost invariably the case when the application is for life insurance, and in these cases the examiner must make the physical examination, secure a sample of urine—and this alone often requires the second trip—and then complete his report at his office or the office of the company when he examines the specimen. Some life insurance companies even require a microscopic examination of this excretion when the application is for certain amounts and do not allow any additional compensation for this work. A microscopic examination to be properly made requires from fifteen minutes to a half-hour, and this, with the time necessary for making a trip or trips for a life examination and the time required for making it, counts up to more than an hour and the fee is seldom over Five Dollars. If this time would be employed for making examinations for accident insurance companies, the doctor could make several of them and double the amount of his pay.

ANXIETY: Every physician in active practice is continually worried more or less over his patients who are very ill and no sooner does he get some of these serious cases off his mind, than others come up and take their places. In life insurance examinations, every applicant who is rejected or who passes only a fair examination causes considerable anxiety to the doctor, for the reason that he is constantly in fear of the agent taking his applicants to another physician and thereby cutting off a part of his income. In accident, health or liability insurance examinations, the doctor makes the examination and reports the exact conditions as he finds them and as soon as he sends his report, he is through with the case and has absolutely no reason to

worry about it or any complications that it may cause between the agent, the company or the claimant. Should the company decline to pay indemnity, the doctor gets no blame, he has had no voice in deciding as to the liability or merits of the claim and therefore he is not brought into any controversy with any one when indemnity is refused in any case.

ACCIDENT INSURANCE PHYSICIANS WELCOME: Claimants expecting indemnity for accidents or diseases are always glad to see the examiner for the insurance company and he is welcome in every case; while in life insurance examinations it is a well known fact that physicians examining for these companies are often considered a bore,—as well as the agent—and sometimes are given scant courtesy.

ADDITIONAL FEES IN COURT TRIALS: In liability insurance examinations there is always a chance that the case may reach a court trial and if it does, the insurance company almost invariably calls on the examining physician to secure additional information before the trial, and when this takes place he is subpœnaed as an expert witness and in such cases is entitled to the fees usually paid for expert testimony in the locality in which the case is tried. This amount varies from Twenty-five to One Hundred Dollars per day.

EXAMINATION BEFORE POLICY IS ISSUED: Accident and health insurance companies frequently ask for an examination of an individual before insurance of this character is granted, and in such cases the examining physician of the company is requested to make the examination and report the exact condition of the individual as he finds it. In these cases, companies expect a recommendation from the doctor as to the desirability of insuring the applicant and this is the only time that the agent may become dissatisfied with anything that the physician may do, as he may think that the applicant is a good risk, while the doctor after making the examination knows that the individual is not insurable for the kind of insurance desired. These cases are not sufficient in number to be considered as even a slight disadvantage, while every case examined for life insurance comes under this category. Physicians who devote a considerable part of their time to insurance work are capable of making three accident examinations in the same time required for one examination for life insurance. This is due to many reasons, the majority of which have been stated above.

PHYSICIAN'S TIME: Doctors in general practice are considered public servants and to be successful they must be ready and willing to answer calls from old or prospective patients at any time of the day or night, and in cases of serious illnesses or accidents are expected to drop all other work and give attention to the one most needing it, which of course is perfectly right and proper, but nevertheless such a condition makes a doctor's life a burden, his time is never his own to devote to his family or to pleasure that he may desire for himself. If he is making a sufficient number of accident insurance examinations he can afford to let his younger or less fortunate confrère answer the calls of the ill and give his attention to insurance work, when he will examine cases during the day, sometimes in the evenings or Sundays, but every day he is master of his own time, coming and going as he wishes and should he desire to take a vacation of a day or a part of one, no one is in a position to say that he neglected a sick person, for such has not been the case. Physicians who have been in practice for some years and have then given it up for various reasons, consider this one of the greatest advantages gained in the change of occupation.

INCREASING ACQUAINTANCE is to be desired by every physician who is practicing medicine, whether he is in general practice or confining his work to a specialty of some kind. The better known a physician becomes, the more practice does he secure in the line in which he is working and therefore any method which he takes to increase his circle of acquaintance will react to his benefit. Examining for accident insurance companies permits a physician to become known in various directions and with a class of people that he would probably have no way of meeting. Accident insurance as sold by most companies is placed among the best class of men in the community, and therefore when these persons suffer disability from an accident or disease, the examining physician of the company makes their acquaintance and if he is at all aggressive, he can usually increase this acquaintance among the friends of the claimant by reason of having had an introduction from his company in making the examination for the accident or sickness,—as the case may be. This manner of increasing acquaintance also holds good with companies doing an industrial accident or health business in which the policyholder pays for his insurance by the month; while these individuals are not of the same social standing in the community,

nevertheless, a practice among any class of people is desirable and this acquaintance can be made to yield valuable returns if the examiner will make himself better known, after having once made an examination for his company.

DIAGNOSIS AND PROGNOSIS: Physicians examining for this kind of insurance and especially when they do any amount of this work, always become proficient in diagnosis and prognosis, as these are the two important points desired by an insurance company. All companies expect their examiners to make a proper diagnosis on the first visit and at the same time they want a prognosis which is as nearly correct as it is possible for a physician to give. Physicians in large cities who do much of this work are always considered good diagnosticians and must be in order to hold their position with the companies they represent. The fact that a doctor does much of this work and becomes able to make a diagnosis in difficult cases assists him greatly in his private practice, as it is well known that after a diagnosis is made of an accident or disease, the treatment is not difficult.

ADJUSTING: Physicians who examine for accident and health insurance companies and who become proficient in this branch of medicine, can develop themselves into adjusters for the companies they represent. Insurance companies find great difficulty in securing men who can properly adjust accident and health claims; therefore, a physician who is a competent examiner and can make a proper diagnosis and estimate the length of time that disability will last, can make a good adjuster if he has any tact and business training. He already has an advantage over an individual who is not skilled in medicine and all he need do is to develop the part required for adjusting a claim. If a doctor learns this part and can adjust accident and health cases,—even though he does not have authority to pay the claim—he becomes of much more value to his company. Physicians who examine for accident insurance companies develop themselves into adjusters by recommending to the company the time that they consider the individual is justly entitled to. If this judgment is correct in the majority of cases, the company soon learns to depend on any recommendation offered and in time the doctor will be permitted to adjust small claims, and authorized to draw sight drafts in settlement of them. The amount of these drafts will usually be limited to a small figure at first, but as experience is gained, the limit is raised until the doctor is adjusting and paying

accident claims of any amount. When a physician is able to adjust and settle accident or health claims for an insurance company and is permitted by his company to do this part of the work, he has a higher standing with his company than a physician who simply makes the examinations, and is better able to protect his interests and retain the examinations than if he was not competent to make the adjustment at the same time A doctor who adjusts for an accident insurance company is so well intrenched with his company that it is almost an impossibility for another physician to secure any examinations from that company,—provided the examiner continues to do his work in a satisfactory manner. Physicians who are competent to adjust cases for one company soon get a reputation among all companies of being able to do this work and are frequently asked by other companies to make an examination, and adjustment if possible, when the company has its own examiner. It will thus be seen that a doctor who takes up this work and becomes a good examiner and then in turn develops into an adjuster, is sure of holding the work with the company which he represents and is also in line to increase this work by the reputation he gets from his ability to examine and adjust properly the different cases that he sees.

COMPENSATION: Insurance companies of all kinds pay for any services rendered them at the end of thirty or ninety days; therefore, a physician who is examining for insurance is sure of his pay and does not need to count on collecting only a certain percentage of it. Doctors practicing medicine in different parts of the country collect from twenty-five to seventy-five per cent. of their bills; while with work from an insurance company, they are sure of collecting one hundred per cent. Life insurance companies usually pay from Two to Five Dollars for ordinary examinations; while accident insurance companies seldom pay more than Two to Three Dollars for each examination. Even though an accident company does not pay more than Three Dollars, yet a physician who is doing this kind of work is capable of making more money than if he was examining for a life company. Accident insurance examinations are made during the day at a time convenient to the physician and usually do not require more than ten to fifteen minutes and probably very little time is necessary in arriving at the place of the examination, as his work often takes him in the vicinity in which the claimant lives; while in a life insurance examination, although he may get a Five Dollar

fee, he must make one or more trips for the examination, do the work at a time usually inconvenient to himself and often must leave his office during office hours while he has patients waiting for him, not only taking a chance of not being able to make the examination, but also losing the amount that he would receive from his office practice. The advantage of doing accident, health and liability examinations is so much greater than making examinations for life insurance companies, that it seems if physicians were familiar with all these advantages, they would endeavor to secure more of this work than they do, thereby materially increasing their income and enlarging their reputation among insurance companies and the community in which they practice medicine.

CHAPTER II

NECESSARY QUALIFICATIONS FOR A SUCCESSFUL INSURANCE EXAMINER

It might be supposed that any physician would be competent to make an insurance examination; a great many are, but the vast majority neglect to ascertain one or more of the important details and the examination is of lessened value to the company that requests it. If a doctor expects to make many examinations he must be able to make them in a satisfactory manner, pleasing the company, the agent and the claimant. To do this he must possess many qualifications in addition to his medical education and must know by study or experience, all the important requirements of an examination. Ability to use his education and experience in making an examination and report that will be a credit to himself and of value to the company is very necessary. Many physicians possess the following described qualifications, few use all of them, while all could use every one of them to advantage.

PERSONAL APPEARANCE of a physician in active practice in any part of the United States demands that careful attention be given to all details which will improve his standing in the community in which he resides. It is a conceded fact by successful business men in all the large cities, that dress is the most important part of a man's personal appearance. A physician who keeps his clothes clean, pressed and presentable, is well dressed, even though the clothes are not of the latest pattern. He will command more attention and more respect from strangers whom he meets accidentally and through friends and business associations, and also among his own close personal friends, than will one who is slovenly in dress without regard to whether he makes a neat appearance or not. A physician should not only dress well but should also wear clean linen and as laundry bills even in large cities are not excessive at the present time, there seems no excuse for a man to wear shirts, collars and cuffs that are soiled and unfit for wear among other well dressed and educated people.

Many physicians are extremely busy and employ more than the usual number of hours for attention to business; even in such cases a doctor who is careful of his personal appearance will not appear with his face covered with one or more day's growth of beard, when he should be shaved daily. The importance of being well dressed,—and by that is meant the wearing of good clothes which fit the body properly, keeping them clean and pressed and the use of clean linen at all times—is something that should not be overlooked by any one, let alone a physician who needs all the assistance he can command in the practice of his profession. It is well known that a patient's confidence in his doctor assists very materially in a return to health and this confidence is strengthened when the physician is always properly and cleanly clothed. Even if a doctor cannot afford to wear the latest cut of clothes he can keep the ones he has and his linen clean, and that alone is sufficient in many cases. When it is necessary to meet strangers frequently—and such is the case in accident, health and liability work —it is absolutely imperative that the doctor be well dressed and make a favorable impression on the first visit, as by dress most men are first judged.

AGE often determines whether a man will be appointed as an examining physician by an insurance company. It is therefore important that this be made known to the company when an application is sent in requesting an appointment as the examining physician or surgeon for a certain locality. Insurance companies, either in the person of the medical director or some one who has the power of appointing the examining physician or surgeon throughout the part of the country in which the company writes business, pay close attention to the age of the applicant. Physicians who are from twenty-five to fifty years of age are more often selected to examine than are men who are younger or older than these ages. There should be no age limit for an examiner, and there probably is none, when the physician has been an examiner for a company for some years or more and his work has been entirely satisfactory. Even though he grows old, it is fair to assume that his services will be continued unless there are other reasons than age for declining them.

GRADUATION: Possession of a literary degree, a high school diploma or an equivalent to either of these, is considered valuable to any man who expects to study medicine, and those who have a good preliminary education are judged to be better

able to make an examination and report briefly and in a concise manner, the result. An insurance company should know the date of graduation from a medical college of all its examiners as the medical director, if possessed of this knowledge, is better able to judge the standing and ability of his examiners than if such is not known. He will usually put more confidence in reports from men who have received a good preliminary education and are then graduated from a reputable medical college.

Physicians who are graduates of the regular or allopathic colleges are more often selected for these appointments than are others. This is especially true in large towns and cities where an insurance company has the choice of men. In the smaller towns and villages graduates of the smaller medical colleges and also those who are not from an allopathic college are sometimes selected for appointment, and in many cases the work proves satisfactory to all concerned.

EXPERIENCE in the practice of medicine is absolutely necessary before a physician can make a good insurance examiner. It makes little difference if this experience has been received by hard work in private practice extending from a few to a number of years, or if it has been secured while acting as a resident physician in a hospital. At the present time it seems that a doctor who has graduated from one of the medical colleges in the United States and has then served as a resident physician in a hospital of a large city, is better qualified than a young man who has graduated and immediately commenced private practice. A doctor who has served two years as a resident physician and surgeon in a hospital and has had from one to three years of private practice after leaving there is considered better qualified for making examinations for insurance companies, either in the accident or life department, than is a recent graduate or one of the older members of the profession. Insurance companies usually select a doctor for an examiner who can fill these last requirements.

A SPECIALTY is often developed by physicians in not only the large cities but also the smaller ones and this increased knowledge that a doctor possesses on any subject must of necessity serve him a better purpose Insurance companies do not consider that a physician should be a specialist in any branch of his profession in order to make the usual examination as required by them, but it will often increase his standing with his brother physicians and also the company when he is called upon to ex-

amine a case in which this special knowledge can be used and it may be of decided benefit to him. It is not a necessary qualification, but a desirable one in many instances.

TACT is more essential in a physician's work and especially in one who is examining for an insurance company than almost any other part of his education, except of course the medical one. This mental perception instantly teaches a doctor how to judge the person about to be examined and tells him by intuition the manner of examining the claimant, what to say and when to say it. Tact is considered by many men as simply an ability to read human nature at a glance and apply this ability in gaining the object desired. No matter what the definition of this word may be, it means that a physician to be a successful insurance examiner must possess it and use it in every case that he examines. It teaches him in some cases to be smooth, gentle and easy in his manner and talk, while in others he must be just the opposite—brusk, abrupt and loud. He must have the ability to know the proper time for use of these different moods; when to change his manner, how to change it and exactly what to say under different conditions; always gaining his point without giving offence. It is one of the most valuable assets that any man may possess, be he a physician, minister, business man or even a laborer. By being a good judge of human nature, a master in the employment of tact, he not only smooths his own pathway, but also leaves behind him gentleness and kindness wherever he goes.

METHOD: Every physician who expects to be very successful must attend to his work in a methodical manner, and this is also true in making an insurance examination, as there is so much to be done and so many questions to be asked, that it is absolutely essential that a certain system be followed. If this is not done a doctor is almost sure to forget to ask an important question or omit examining a certain part of the body which should be examined and reported upon. Experience teaches physicians who are doing much examining for insurance companies, that they must have a well established procedure for all cases, but as practically all insurance companies furnish a blank to be filled in by the examiner, this blank furnishes a base for the examination. All blanks, however, are not complete, as it would be impossible to design one that would meet all requirements. If a blank is furnished, the examining surgeon must secure answers to all the questions on it and when that is finished he should take

up different lines of questioning which his judgment and experience teach him are important to the particular case that is being examined. If a blank is not furnished for an accident examination, there is certain information that the company expects, such as the name of the claimant, the age, height, weight, residence, occupation, date of accident with a short history as to the cause, where it occurred, together with the length of house confinement and the duration of total and partial disability. If the examination is of an individual disabled by illness, the company expects all of the above, substituting however, for the date of accident and its history, the date of the beginning of illness, together with the signs and symptoms and the length of house confinement. It is also well to give the name of the attending physician and his address and any other information which would be of use to the company regarding the particular case under consideration.

ACCOMMODATING: In making examinations for an insurance company, several parties must be considered, the company, the agent, the person to be examined and the examiner. The company expects the examiner to oblige the agent by making the examination at the earliest possible moment consistent with the wishes, the residence, the occupation, etc., of the claimant. In making examinations for accident, health or liability insurance the company often gains by not having the examination made until a few days after the accident has occurred. In such cases if the physician will explain the condition to the agent,—when the examination has been requested by him,—it is often possible to postpone it one or two days, and, by doing so, the physician can arrange his own work and make the examination at a more suitable time to himself. Sometimes the attending physician who has been consulted before an examination is to be made in an accident case, will request that the dressings be not removed. In such cases, unless there is a suspicion that the claim is a fraudulent one or it is absolutely necessary for any other reason, the examining surgeon should respect the wishes of the attending physician by conforming to his request. If the examiner will accommodate all parties concerned in an insurance examination, considering himself the last one to be obliged, he will find that his reputation is enhanced and his work will thereby show a considerable increase in this line.

PROMPTNESS in making an examination when an individual has been reported as suffering from an accident or illness,

is one of the most desirable qualifications of an insurance examiner and might almost be said to be the principal one, as no company will continue the services of any physician when his services are rendered three, five, seven or ten days after a request has been made for an examination. Many physicians do not seem to realize this point and when a company or an agent asks that an examination be made, they pay no attention to it until some days have passed and then most likely when they do make the examination, evidences of the accident have disappeared, if the case be one of accidental injury, and if an illness, the acute signs and symptoms which would serve to make a differential diagnosis have ceased to exist. When an accident happens to an individual, the company may not receive notice until several days have elapsed after the accident occurred. After the notice has been received, one or more days are usually required at the home office in getting out a letter of request for an examination to the doctor and then additional time is required for the letter to travel between its origin and its destination. It can therefore be seen that when an examination is requested by a company located, as for example in New York and the accident or sickness disables an individual who resides some distance from the home office, that considerable time has already elapsed before the company can get word to its examining physician to make the examination, and he must be very prompt in visiting the case for the purpose of seeing any signs of an accident, and especially those of a more trivial nature, if he expects to be able to report having seen the actual evidence of the injury. This applies more forcibly to diseases, the signs and symptoms of which change and disappear very quickly. Neglect on the part of physicians in making an examination at once when requested is well known, and often commented upon adversely at the home office. Frequently the report of an examination is received at the home office of a company from seven to fourteen days after it has been requested, and in many cases the claim has already been settled, and in such cases the company has absolutely no need of the report of the examination. A doctor cannot become a successful insurance examiner unless he is prompt in making examinations that are requested by insurance companies. If he receives in the morning mail a request for an examination of an individual, he should see and examine the party on the same day and after the examination is made his work should be completed by getting his report off promptly,—in the

next outgoing mail if possible. By so doing, the report will not only be of much service to the company, but what is more important to him, his work will be satisfactory and in a short time he will be the doctor who not only receives requests for all the examinations from that company, but also is being asked to make examinations for other companies.

CONCISENESS in talking or writing is something that should be acquired by every one, and it is especially desirable in reporting examinations to insurance companies. A physician who can make an examination in a short time and report it briefly and concisely without leaving out any of the important information that he has secured, is the one desired by insurance companies. It must be remembered that the person at the home office,—either the medical director or the claim examiner,—is a busy man and he has many reports to read, not only on one day, but every day, and he is sure to favor an examiner who can make a thorough examination and just as thoroughly report it in the proper manner. On account of so few physicians possessing this qualification, insurance companies have been compelled to use a blank form that may be sent out and filled in by the examining physician. This form assists the examiner in attempting to get all the important points or information that may be derived from the examination and also makes the report more brief than if the physician had been allowed to write a letter concerning the case. Physicians who are not connected with the home office of an insurance company or placed in a position where they have an opportunity to look over the work of others, do not know how much time can be gained by a medical director in a home office when he is enabled to read reports which are well formed grammatically and at the same time brief and to the point.

RELATIONS WITH AGENT: A successful insurance examiner is one who can always be on good terms with any agent that the company may place in charge of its office. To have a good feeling existing between the agent and the doctor is necessary, just the same as it is necessary to have harmony between different officers of a company if that company expects to be successful. It is not expected or required of a doctor that he be a personal friend of an agent, but he should be pleasant, affable and willing to accommodate the agent in making the examination promptly or in keeping an appointment which has been made by the agent for him, even though it may be somewhat inconvenient.

The company also does not desire that any personal relations which may exist between the doctor and the agent, may cause the doctor to favor the agent in making his reports of examinations; in other words, no matter in what position he finds himself with the agent, he should remember that he is employed by the company and is expected to furnish them with a report of an examination which is unbiased by any local conditions. This is often very difficult, especially in the smaller towns and villages where the doctor may be well acquainted with the agent and also be a close personal friend. He, however, should guard himself against these conditions and endeavor in every way possible to furnish his company with a true report of the conditions as he finds them; by so doing his services become very valuable to a company, for the simple reason that the company can depend on anything he says.

INSPECTION: To learn by inspection is only acquired after long practice and close attention to details. However, it is a very valuable asset to any physician who attempts to examine accident or health cases for insurance companies. If he is able to take in at a glance many little things that he sees, not only about the claimant but also concerning his surroundings, his mode of life, his friends, his actions, etc., he will greatly increase his efficiency to the company and to himself. This ability to judge conditions at first sight is extremely essential in one who is doing this kind of work, as very often when he first sees a case, his suspicions are frequently aroused over some action or other little detail that would not be noticed by an ordinary observer, and he is put on his guard and probably by this ability a fraudulent case is not overlooked.

AGE, HEIGHT AND WEIGHT is almost always demanded in a report of an insurance examination. There are many reasons for this; perhaps the most important one being that the medical director can compare the report of the examiner with the application and is thereby enabled to ascertain if the individual examined is the same one who applied for and was granted insurance. It is therefore important that the examiner judge accurately the age, height and weight of the person he examines. The majority of people can estimate fairly well the age of others, but all cannot tell the height and weight of individuals. For this reason it is advisable that the examiner ascertain the exact height of the person he examines, and this can only be done by meas-

uring. It is a very easy matter to carry a tailor's tape measure or even a metal one and always be prepared to measure the height of any claimant. For the purpose of being better able to judge the height of an individual,—when a tape measure is not at hand, —it is well that the physician himself knows the exact distance from the floor to his own shoulders, his chin, mouth, eyes and top of the head. If he is familiar with these different distances, he is able to decide the height of almost any one within an inch, and if he can judge the height as near correctly as this, his judgment on this part of his report becomes of value even though he has not measured the individual.

If possible all cases should be weighed and the exact weight of the individual reported to the company, but as is well known, this is impracticable in a number of cases, and the physician must guess at the weight. By knowing the exact weight of himself, and also of some of his immediate family and friends, in comparison with the height, he can estimate well enough for the purpose of reporting an examination of an accident or health risk.

DIFFERENTIAL DIAGNOSIS: Ability to make the diagnosis between two or more diseases, especially when they resemble each other, is acquired by physicians at different stages of their career. Some doctors are more proficient in this branch of the profession than others, and can readily make the differential diagnosis when called upon to do so. Others acquire this skill only after long practice, but whether learned in the early part of a physician's career or not, it is extremely valuable to him, as he is thereby enabled to better make the diagnosis of all accidents and diseases in his private practice and in consequence give his patients better treatment from knowing the exact cause of the disability. The fact that he possesses this talent enables him to give better service to an insurance company, as in practically all cases he has only one opportunity to make the diagnosis. By this is meant, that the company requests the examination of an individual and pays the doctor for one visit. If he is not able to make the diagnosis at the first visit and must go the second or third time, he does so at a proportionate reduction in his fee, because the company only pays him for one trip. It is therefore extremely important that he be able to make the diagnosis of an illness at the first visit; and also to differentiate between fractures and dislocations and other accidents. If he is very proficient in this branch of his profession, he will in most cases detect a fraud-

ulent claim, and this is one of the principal objects of his examination. Fraudulent claims are frequently made on all insurance companies, and this is more often true when the claimant belongs to the lower classes or is one of the numerous foreigners who now make up a large part of the lower laboring classes of this country. Even though they are undesirable risks, they are insured, and naturally, when once insured, have claims, and the examiner must be able to detect fraud whenever it is attempted.

CROSS-EXAMINATION OF CLAIMANT: This is one of the parts of an examination that a doctor is sometimes called upon to undertake. When he examines an individual of more or less standing in the community and in which there appears no possible reason to cheat the company, it is necessary for him to be able to cross-examine the claimant *without the claimant's knowledge.* When he examines persons who are making claims for accidents or illnesses, and these persons come from the lower walks of life, it is very necessary that he be able to use his knowledge in preventing the attempt on the part of the claimant in many cases to conceal or misrepresent facts. The cross-examination of such claimants is of no use at all if the physician is not able to do this without the claimant's knowledge. A physician with his medical education is at a great advantage when he attempts to cross-examine some one who is concealing facts, for the reason that his medical education has given him the proper signs and symptoms of accidents and diseases, and even though the claimant may state that he suffers from different symptoms, a physician should be able to make the claimant admit in other ways by answering certain questions that he has contradicted himself. The cross-examination of individuals of the higher walks of life, when an attempt is made to foster a fraudulent claim upon the company is much more difficult. In these cases,—which, fortunately, are few,— a physician has not only to combat a man with perhaps the same literary education as himself, but also one who has studied the principal signs and symptoms of the accident or disease from which he claims to be suffering. It therefore becomes much more difficult in these cases and the chances of the physician detecting a fraudulent claim become less. In such cases when the examiner suspicions that the claimant is making a fraudulent claim, the company will usually authorize and pay for a second or third examination, if it is possessed of the facts or suspicions of its examiner.

IMPARTIAL REPORTS: In making a report for an insurance company of an examination, the examiner should be particular that his report is fair to all concerned. He should report the conditions exactly as he finds them and not allow his personal feelings to enter into the matter at all. It is very difficult for some physicians to do this, as their relations with the party examined may be so close that it is almost impossible not to favor the claimant. Such a condition, however, must be constantly guarded against and every endeavor made to report the findings of the examination precisely as they exist. An insurance company can act with more justice to the claimant, if its examining surgeon reports the case exactly as he finds it and does not attempt to discolor his remarks in any way, either favorable to the company or the claimant. This ability to report exactly the condition as found, if not possessed by the doctor, should be cultivated by him and in time his reports will become more valuable to the companies for which he is working.

EXPLANATIONS: Practically all companies when requesting an examination from a physician, send out a blank report. These reports should be answered by being filled in by the examining physician in his own hand writing and in ink and each question answered at the time and place where the examination is made. These points are very important, and usually all companies will return a blank which is not filled in by the examining surgeon in ink and all the questions properly answered. If the examiner deems it impossible to reply to one or more of the questions, he should indicate in some manner that he has seen the question and cannot answer it, such as a check mark or a small horizontal line. By treating the question in this manner, the person at the home office who reads the report knows that the examiner has seen it. However, as all questions are put on the blank for a special purpose, it is very poor judgment on the part of the examiner to neglect answering any of them. Every one should be answered in some way, even if a note of explanation has to be added to the report and this can generally be done under the subject of "remarks" which usually ends all blanks.

GOOD IMPRESSION BY EXAMINER: Individuals who can meet strangers either by a personal introduction or through the needs of business should be able to make a friend out of every person thus met. On account of the character of the work of a medical examiner, and especially in examining for accident,

health and liability insurance, it is essential that the physician makes a good impression, and when he leaves that the person whom he has examined will not only think well of his ability as a medical man, but also consider his personality perfection itself. Insurance examinations require that a physician develops to a high degree many traits of character and action that place him beyond his usual associates. Ability to examine a person who is opposed to the examination and who hinders the examiner in many ways, is only acquired after much practice, but when once acquired, an individual who has received the examiner in an uncourteous manner, will have his opinion entirely changed when the examination is over, and will not only speak favorably of the physician but will also willingly permit a future examination at any time if necessary. When a physician has changed the attitude of a claimant by leaving behind him a good impression, he assists the adjuster of the company very much when the time arrives for the settlement of the case. All persons making claims under accident and health policies must be examined and treated in the most courteous manner possible; the doctor remembering that the injured party has taken out his accident or health insurance only after earnest solicitation on the part of the agent, and unless the examination is properly made and the claimant left in a satisfied frame of mind, the agent is almost sure to lose the policy at the next renewal, and when he loses a renewal he loses a commission which means to him a certain amount of dollars and cents, and just as soon as he has occasion to have his pocket touched by untactful work on the part of an examiner, just so soon will be begin to make complaint of the doctor's work and endeavor to have another examiner appointed. In liability examinations the injured party is not insured and the company in making a settlement does not care if the party is satisfied or not; but this condition of affairs does not excuse the doctor who makes the examination, if he be rough or discourteous in any manner whatever.

THE RESPONSIBILITY of an insurance examiner is very great on account of the multiple duties that are required when making an examination. It is necessary that nothing be overlooked, as the company may demand information upon it at a later date. All information that is acquired during an examination must be transmitted to the company as soon as it is received, as it is impossible to tell at the time of the examination whether

the case will reach a court trial or not. Physicians are responsible to the company for their work and the company in return is responsible for their acts toward the claimant. It is therefore highly important that these facts be recognized and that the examiner do nothing that may reflect in any way upon the company or place the company in any position that it may be liable for damages for his acts.

FEES AND BILLS: Physicians are usually paid a certain fee which is either agreed upon before the examination is made or the usual price which is paid in the locality in which the examination is held, is allowed, consideration being given to the distance that the doctor is compelled to go in making it. Insurance companies generally pay very well for the services they demand and they should receive the most complete report that an examiner is capable of getting. In some of the large cities, physicians are employed on a salary, and for a certain stipulation agree to make all the examinations that are necessary. When the examiner is paid for each individual examined, the company in almost all cases pays for the services rendered and usually the check is sent from the home office.

It is always well in presenting accounts for collection to an insurance company, that each account be made out separately; and most companies request that bills be presented to them monthly; if not at the end of thirty days, accounts should be presented at least every three months. If delay is had in presenting these accounts, the claim is usually settled and filed away and a certain amount of labor is required at the home office in searching for the papers and checking off the doctor's bills. Many insurance companies file all the papers connected with each individual case in a separate envelope, therefore they insist on a separate bill from the physician for each examination that he makes. Not only do insurance companies desire and benefit from the proper and systematical presentation of bills, but also the examiner as well, as he receives his money soon after his services are completed, something that does not frequently occur in private practice.

CHAPTER III

EXAMINING FOR ACCIDENT INSURANCE COMPANIES

PART I

ACCIDENT EXAMINATIONS

If an individual carries an accident insurance policy and suffers from an accident, he should immediately notify the company that he has been injured. These notifications, however, are not always sent at once, sometimes being delayed from a few days to several weeks and sometimes not even sent until after all evidence of the accident has disappeared and the party has returned to work. When an accident insurance company receives notice that one of its policy-holders has been injured and that total or partial disability is present, it is the custom of the majority of companies to have the party examined by the examining surgeon who is notified either from the home office or through the agent and requested to make an examination of a certain individual whose name and address is given him. On receipt of such information, the doctor is expected to see the injured party, make the examination, and send in a report at once. A number of points must be considered by the physician who makes this examination, and the following are the important ones:

PURPOSE OF EXAMINATION: Insurance companies are compelled to have an examination made of the policy-holder when that person becomes a claimant, for the simple reason that they cannot always depend on receiving a report from the attending physician; and even when a report is received promptly from the physician, in many cases he does not reply to all questions on the blank or if he answers them, a number are answered in an evasive manner or in such a way that the company is led to believe that certain information which might be valuable to them is withheld. On this account it is necessary that the company's examiner

see the claimant, and make a full report of the exact condition as found to be existing.

PLACE OF EXAMINATION: It must be remembered that an individual who carries an accident insurance policy has done so in almost every case only after he has been asked and importuned many times by the agent; therefore, when he suffers from an accident, even though he expects to get some of his money back,—as the expression is,—he demands and so also does the agent, that the examination be made at a place most convenient to the policy-holder, and this place is either his home or his place of business. When a person is totally disabled, he can always be found at his home; when partially disabled, he may be found there or attending to some part of his business which may require his presence on the street or in his office. If the party is totally disabled and confined to the house, the question as to the place of examination is easily decided. If he is only partially disabled and is attending to a part of his business, it is necessary to ascertain in some way where the claimant can be seen and examined, and this can usually be best done by telephoning and making a definite appointment for the examination. It is always best to examine the individual at his home or place of business, as very few policy-holders will accommodate the doctor and call at his office or at the office of the insurance company for examination. If the examiner will always accommodate the agent and the policy-holder by making the examination at a time most convenient to the claimant and at his home or place of business, he will strengthen his relations with the agent, and usually be favored with the majority of the examinations from the office over which the agent has control.

EXAMINATION WITHOUT ATTENDING PHYSICIAN: Professional courtesy among physicians demands that a doctor in making an examination of another physician's patient, do so in the presence of the attending physician, but this cannot always be accomplished by an insurance examiner. If he attempted to examine every insurance case in the presence of the attending physician, he would soon find that he was making one to two or three examinations only per day. This method of procedure can usually be carried out in the smaller towns, but it is an impossibility in the large cities where a physician examines for a number of companies and must necessarily see these cases at the convenience of the policy-holder and with some regard for

his own time. The policy which is held by the claimant contains a clause giving a medical examiner of the company "the right to examine him at any time and as often as he may deem it necessary." It can thus be seen that the examining physician is protected and has the right to make an examination of a policy-holder who has been injured, at any time that he desires. Professional courtesy should be observed whenever possible, but when that courtesy interferes with business, it must necessarily be set aside.

EXAMINATION WITH ATTENDING PHYSICIAN: At the time the company is notified that one of its policy-holders has been injured, it is occasionally requested that the examiner make the examination in the presence of the attending physician. Whenever this is done, it is always well to accede to the wishes of the claimant and endeavor to make the examination as desired, and arrange an appointment with the attending physician for this purpose. Very often he will state that he has no desire to be present and request the examining surgeon to proceed without his presence; in which case the examination can be made and the claimant told that his attending physician authorized the examination and stated it was not necessary that he be present. Requests that the attending physician be present at the examination are sometimes made with the intention of delaying it. These occurrences, of course, are only seen in attempts at frauds, and great care must be exercised by the examiner in deciding if he will make the examination at once without the presence of the attending physician,—as he has a perfect right to do,—or wait until he can make an appointment with him.

EXAMINATION: In order that an examiner for an insurance company may make as many examinations as possible and thus use to good advantage each day, he should have a certain routine method of procedure well fixed in his mind and follow this in every case. If he does this he will make a much better examination, consume much less time and send in to the company a report which is rarely lacking in anything that might be desired. If a blank has been furnished for the report of the examination, it is best to ask each question in its turn and secure an answer from the claimant, writing down his answer in his own words as near as possible, and at the time of the examination. Some physicians examine a case and then fill in the report at their office. This is a very poor custom, as in almost every case the

doctor is unable to fill in some part of the report, and therefore has to either check it off or allow it to remain unanswered, causing the company to return the report to him for correction and this in turn requiring him to make another trip to the claimant if he is conscientious and gives the company the information they desire. When a blank has not been furnished by the company, then it is necessary that the physician make his examination and report his findings in his own way. It is very important that he obtains the claimant's name, address, age, occupation, weight, height, date of accident, place of accident and mode of occurrence, with the signs and symptoms together with the length of house confinement and the duration of total and partial disability. After securing the history as above, it is necessary that an examination be made of that part of the body which has been injured. When an individual is suffering from a sprain, contusion or abrasion, and these injuries are covered by dressings, they are very easily removed and an examination made. If the injury be more severe, such as a fracture or dislocation, the dressings should not be removed unless in the presence of the attending physician. If they are removed under such circumstances and any ill result supervenes, it is always said to be the fault of the examining surgeon, and the company may possibly be held liable for any damages which the claimant might wish to make. If a fracture or dislocation be claimed, and it is the opinion of the examining surgeon that such is not the case and that the claim is a fraudulent one, then it is best that the examiner remove the dressings and know if the condition as claimed exists or not. Sometimes such injuries as sprains, or fracture of the ribs are treated by having the parts covered by adhesive plaster. In these cases the examining physician must be guided as above indicated as to whether he removes the plaster or not. When lacerated or incised wounds exist on any part of the body and are covered by dressings, the examining surgeon can easily ascertain if such wounds exist by removing the outside bandage and then lifting up a corner of the dressing, being very careful not to touch the parts or the gauze which comes in contact with the open wound. If careful attention is paid to this part, the examiner knows he has not caused any infection, should the same show itself at a later date and he be accused of producing it by removing the dressings. The examiner will meet a number of conditions which have not been enumerated above, and to meet them he must use his own best judgment and common sense.

COMPANY REQUIREMENTS: Insurance companies desire a report on an individual who has been injured, for the purpose of furnishing them with information which may be used in the equitable settlement of the case; and if a physician will bear in mind the important parts of a report as given under the above headings, he will be able to send in a report to his company that will meet all of its requirements and thus enable it to settle the case fairly to all concerned. In addition to securing the desired information, it is absolutely necessary that the examination be made promptly and the report forwarded to the company just as soon as possible. If an individual suffers from an injury to any part of the body, the examiner should state the exact location; when a contusion, the area of tissue involved must be given, if an incised or lacerated wound, the length, together with the number of sutures required to close it. This enables the medical director to judge as to the duration of disability which will or has ensued.

MEDICAL TERMS: All accident insurance companies employ an individual whose duty it is to look over the various claims received and who is called a claim examiner. The occupant of this position is one who has had experience in adjusting accident and health claims, but he is seldom a graduate in medicine; therefore, when sending in a report to an accident insurance company, it is necessary that the physician use terms and expressions which may be understood by laymen. The examiner may use medical terms if he wishes, but in every case they should be explained. A claim examiner is more or less familiar with medical phraseology and in a number of cases is not compelled to look up the meaning of medical words; but in others, unless the explanation is given with the report, he loses valuable time in searching for the definition of a term used by the examiner.

If physicians who examine for insurance companies will bear this in mind and always make their reports intelligible to one who is not familiar with medical terms, the report will be more creditable to the examiner and he will stand in better favor with the individual who has to read them.

NO PRESCRIBING BY EXAMINER: Physicians are often asked to prescribe or suggest other forms of treatment for the injured party; under no circumstances should the examining physician give such advice. If he does so, he immediately causes trouble between the attending physician and his patient, and this trouble extends and involves himself with his brother physician.

If for any reason the treatment does not meet with his approval, it is his duty as the representative of the company to confer with the attending physician, and, if possible, point out to him where he is in error and have the proper treatment given to the claimant.

NO CRITICISM OF ATTENDING PHYSICIAN: Claimants will often ask the examiner of an insurance company if they are getting the proper treatment, and sometimes will state openly that they know they are not. This may or may not be true, but whether it is or is not, the examining surgeon for the insurance company should be exceedingly careful that he does not say a single word against his professional confere even though he knows that the treatment is not proper and is not satisfactory to the claimant, it is not his duty to agree with the claimant and censure the attending physician in any way or manner whatsoever. If he mentally agrees with the claimant, he should not indicate to him in any manner that he does so, but he should follow the lines as laid out under the above heading and confer with the attending physician at a time when the claimant is not present. Professional courtesy demands this, and in addition the examiner is sure to make a friend out of the attending physician and also the claimant, when he refuses to be led into expressing an adverse opinion concerning another doctor.

DIAGNOSIS AND PROGNOSIS: An insurance examiner is often asked by one suffering from an accident if the diagnosis, as given by the attending physician, is correct. In such cases, if it is correct, it is well to say so and uphold the attending physician in every way possible; should it not be correct, an evasive answer can easily be given and the attending physician consulted at a later date. The prognosis as given by the attending physician should not be commented upon by the examiner even though he is asked to express an opinion by the claimant, except in cases where he intends or hopes to make an adjustment of the case. When the examiner has the authority to settle the case, he may himself ask for the prognosis of the attending physician, for the better purpose of guiding his own judgment in making a settlement. If the prognosis is acceptable to himself, and he can effect a settlement according to it, it is best that he do so without expressing his own opinion unless it be to confirm that of the attending physician.

REMARKS: Physicians who examine for insurance companies are expected to furnish the company with any information

that may come into their possession regarding a certain case, and for this purpose blanks usually contain space under this heading. Sometimes, however, a doctor does not care to put down on his examination blank, and especially when that blank is first presented to the agent, some information that he may have secured and which is not specifically demanded by the blank. Under such circumstances, it is his duty to send the company this information in a confidential communication.

BLANK: If a company in asking for an examination of an individual has not furnished a blank form, the examiner may use the following which will usually furnish all the information that any company would desire.

Policy No. ..... Claim No. .....

ACCIDENT EXAMINATION BLANK

Name ..... {Residence and Place of Examination .....

Date of Examination ..... 190 ..... M. Occupation .....

Previous Occupation .....

Present weight ..... lbs. Age ..... years.

Weight ..... lbs. ..... years ago.

Height ..... feet ..... inches. Appearance ..... Nationality .....

History of previous accidents, diseases or operations .....

.....

.....

Date of Accident .....190 .... M. Place of Accident .....

Mode of Occurrence .....

.....

Signs .....

.....

Symptoms .....

.....

.....

Location and Extent of

Abrasion .....

Laceration .....

Contusion .....

Incision .....

Sprain .....

Dislocation .....

Fracture .....

Burn or Scald .....

Punctured Wound .....

Confined to the house from ..... 190 .... M. to ..... 190 .... M.

Totally Disabled from ..... 190 .... M. to ..... 190 .... M.

Partially Disabled from ..... 190 .... M. to ..... 190 .... M.
Accident Insurance Carried .....
.....
Attended by Dr. .....Address .....
From .....190 .... to .... 190 ....
Prognosis .....
Remarks .....
.....
.....

The above form of accident blank is one that has been used by the author and found very satisfactory in reporting cases to different insurance companies, and as it appears plain and easily understood by any one, it is not considered necessary to make any explanations concerning any part of it, as the blank explains itself.

PART II

HEALTH EXAMINATIONS

Accident insurance companies issue a form of insurance known as a health or sickness policy, and this provides weekly indemnity to an individual who is suffering from a disease which is covered by the policy. Some policies are known as special health policies and cover only a limited number of diseases, these diseases being enumerated in the body of the contract. A general health policy covers disability from all diseases, subject of course to the conditions of the policy. When an individual who is carrying either one of these forms of policies becomes ill, it is his duty to notify the insurance company which in turn notifies its examining physician and requests that an examination be made and a report furnished them. It is considered very important by an insurance company that its own physician make an examination of the party who is ill for the reason that in the special health forms, it is necessary that a man be suffering from one of the diseases mentioned in the policy in order that he may be covered by it and entitled to weekly indemnity. The examination and report of an individual who is carrying a health policy, while on the same lines as one who is carrying an accident form, differs from it in many ways.

PURPOSE OF EXAMINATION: It is extremely important for an insurance company to know the exact cause of disability of any of its policy-holders and especially when the policy-holder is covered by a limited or special health form. This can be readily understood when it is recalled that if typhoid fever is covered by one of these limited forms and the individual is suffering from another disease which is not covered by the policy, it is highly important that the company know the proper diagnosis in the case. If it is not so informed, it may pay out one or more weeks of indemnity for sickness which should not be payable under the conditions of the policy. Physicians who are examining cases in which indemnity is claimed under a health policy, must be exceedingly careful to make a proper diagnosis of the case, as any mistake on their part may cost the company considerable money.

PLACE OF EXAMINATION: Health policies usually require house confinement as one of the conditions under which indemnity is payable, and when an individual makes a claim on a company for indemnity, it is supposed that he is confined to the house; therefore, the examination must be made at his residence or hospital, if he has been removed to such a place.

EXAMINATION WITHOUT ATTENDING PHYSICIAN: As in the case of an accident insurance policy, the examiner of the insurance company has the right to make an examination of the policy-holder without conferring with the attending physician. He can use his own pleasure as to whether he consults with the attending physician before making an examination. If he does make an appointment, he will of course have no difficulty in examining the claimant. Should he call on the policy-holder and be denied admission to the patient, he can generally see him by stating to the family that he is a physician himself and under the terms of the policy, he has the right "to see and examine the claimant as often as he deems necessary." If the individual is very ill, an examining physician would in most cases only go into the room and remain a few minutes, simply satisfying himself that the person is in such a condition.

EXAMINATION WITH ATTENDING PHYSICIAN: Should the company on receiving notification that one of its policy-holders is suffering from an illness be asked at the same time that its examiner make an appointment with the attending physician for an examination, it is best to comply with the request, and either call the attending physician by telephone or

write him and arrange an appointment at an early date. If the company or the examiner has any suspicion that the individual is intending to make a fraudulent claim, an examination of the party should be made at once without regard to the request that the attending physician be present. In such cases when the examiner calls on the person who is said to be ill, he may be denied permission to see him or make an examination; when it is his duty to state to the person in authority, that he is a physician of the company and has called to make an examination and that he has the right to do so under the terms of the policy. If permission is still refused, he should state the company reserves the right to stand on that condition of the policy, which makes it void if permission is refused to any of its medical examiners to make an examination whenever they consider it necessary. When these explanations are given to the family or to the one who is refusing permission to see the claimant, the doctor generally succeeds in making the examination as he desires.

EXAMINATION of an individual suffering from an illness and carrying a health or sickness policy, should be made immediately upon receipt of request from the company. If a blank has been furnished, it is of course necessary that the questions be asked and the answers filled in. Sometimes it is more convenient to the examining physician to only ask part of the questions and then make the physical examination and form his opinion as to the cause of illness. In such cases it is always well to look over the blank before leaving the house and notice if any information is demanded which has not yet been acquired by the physician. Should the company not send a blank and the examiner be compelled to rely on his own judgment and experience, he should take the name and address of the party, occupation, previous occupation, present weight, also the weight some months previously if there has been any change, the height, age, appearance and nationality. After this part has been learned a history of previous accidents or illnesses should be secured and if any are noted, the company wants the date, duration, cause and condition of recovery of each one. After having secured this, the date of sickness should be taken, with its mode of onset, together with the signs and symptoms, after which the temperature and pulse may be ascertained. It is also necessary to give the dates between which house confinement existed and the length of total disability; and when total disability is existing after the termination of house confinement

the company wants to know how long it has lasted. Having secured this part, a good examiner will then proceed to make a physical examination of the individual, paying special attention to that part of the body which is involved in the present illness, and after he has finished that part, the heart and lungs should always be examined, and if any abnormality is found, it should be reported immediately so that the company may cancel the policy after the termination of the illness, if it considers that action necessary. To make an examination as described would seem to require considerable time, but if the examiner has a routine to follow, he can very easily secure answers to his questions and then the physical examination which tells him the cause of the illness can be just as easily and quickly done, and when he has finished he feels confident that he has not overlooked anything that may be of value to the company; in other words, he has used system in his examination and the result is a completed report which should be forwarded to the home office at once.

COMPANY REQUIREMENTS: When making an examination under a health policy, the company must be furnished with certain information in order that it may take intelligent action on the case. Each and every question on the blank should be answered in a brief manner, but not so concisely that important information is omitted. It is often necessary to add information that is not demanded by the company, which is important and which will assist the medical director in deciding as to the merits of the case. In addition to the above, the company demands that no delay in making the examination occur after the request reaches the hands of the examiner, and that the report be mailed promptly. In giving the signs and symptoms and the reason for making the diagnosis, it is necessary that all signs and symptoms be described briefly so that the medical director may not only know himself, but may also be able to show at a later date that such a disease existed, and this can only be done when the examiner puts down on his report a full, yet concise summary of his examination.

NO PRESCRIBING: A physician is asked more often to prescribe when he makes an examination of an individual who is sick, than when he sees an accident case, and it hardly seems necessary to caution any one that such a thing should not be done, but when seeing a number of cases, and especially some who are nervous and are very persistent in asking for advice, it will be

found hard to refuse such information. It must be done, however, but in such a courteous manner that no offence will be given to the claimant.

NO CRITICISM OF ATTENDING PHYSICIAN: In cases where the diagnosis is doubtful there is a tendency on the part of the examining physician to state that he does not believe the individual is suffering from a disease as claimed. While this is not exactly in the shape of criticism, yet it can readily be construed as such by the attending physician; therefore, when the examiner does not agree with the physician of the patient, it is best to remain silent in the presence of the claimant, and if necessary, at a later time, confer with the attending physician by telephone or otherwise. When the individual carries a limited health form and the diagnosis by the attending physician is correct and the disease is not covered by the policy, the examiner is within his rights in stating to the claimant that he is suffering with the disease as diagnosed by his attending physician, but such a disease does not entitle him to indemnity under the terms of his contract with the company. It will be seen in a case of this kind that the examiner is not criticising the attending physician, but is agreeing with him and at the same time he is protecting the interests of the company by keeping the individual from making a claim. If that party knows in advance that he is not covered by his policy, he will accept his position gracefully, yet if he does not know and makes a claim and the claim is disallowed, he is angry with the company and is ready to say his insurance is no good and many other untrue things. If the diagnosis as made by the attending physician and the examiner is not the same, but the two diseases are closely allied to each other and one is covered by the policy, while the other is not, it is just as well that the examiner does not express his opinion. For example, if an individual is suffering from the grippe and in addition has acute bronchitis, and this latter disease only is covered, the attending physician can certify to the insurance company for the benefit of his patient that he is suffering from bronchitis. This statement may be correct, although the bronchitis is only a complication, the real disease being the grippe. When the examining physician sees the individual, he recognizes the fact that the party is suffering from the grippe, which is complicated by bronchitis. It is useless to make any statement to the claimant that he is suffering from anything except bronchitis, as the attending physician will stick to the fact

that the man has bronchitis and the company must pay the claim, therefore it is advisable that the examiner in such cases report the condition to the company only and not express any opinion to the claimant or the attending physician. By doing so the examiner will avoid being accused of criticising a brother physician.

BLANK: It is always best in reporting the results of a health examination that it be done on a blank form which is furnished by the company. If this form has not been forwarded with the request for the examination, an examiner can make out his report according to the following blank, which has been found from experience to answer the purpose of most companies, giving them the information desired.

Policy No. ..... Claim No. .....

HEALTH EXAMINATION BLANK.

Name ..... { Residence and Place of Examination .....
Date of Examination ..... 190 .... Occupation .....
Previous Occupation .....
Present Weight ..... lbs. Height ..... feet ..... inches.
Weight ..... lbs. .....months ago. Age ..... years.
Appearance .....Nationality .....
.....
.....
History of Previous Illnesses, Accidents or Operations .....
.....
.....
Date of Sickness ..... 190 ..... M.
Mode of Onset .....
.....
Symptoms .....
.....
.....
Signs of Disease .....
.....
.....
Temperature ..... Pulse ..... Its Character .....
(When taken)
Diagnosis .....
House Confinement from ..... 190 .... M. to ..... 190 .... M.
Totally Disabled from ..... 190 .... M. to ..... 190 .... M.
Convalescent but totally disabled without house confinement from ..... 190 .... M. to ..... 190 .... M.
Health Insurance carried in ..... Company, $ ..... per week.
Attended by Dr. ..... Address ..... from .....190 ..
to ..... 190 ..
If disability is prolonged, cause .....
Prognosis .....
Claimant regarded as ..... risk for health insurance.
Remarks .....
.....

It seems hardly necessary to add any explanation to the above form, but it might be well to again state that an insurance company expects the report to reach them promptly and with each question answered. Blanks that are held for a number of days after having been filled in, even though the examination has been made promptly, are of little service to the company; the same also applies when the questions are unanswered and no explanation given.

DIAGNOSIS: An examiner must be capable of making a diagnosis at the first visit in practically every case which he examines for an insurance company that is covered by a health policy. When the diagnosis has been made by the examining physician, it is not necessary that his findings be communicated to the claimant, except when the diagnosis is the same as that given by the attending physician, in which case it is always well to say that the diagnosis is correct. If the examiner does not agree with the attending physician and makes a different diagnosis of the illness, it is best that he does not give the claimant the benefit of his opinion, but he should send it to the company with his reasons for differing with the attending physician.

PROGNOSIS: Almost every person who is ill is desirous of knowing the time when the sickness will probably terminate, and the question as to the prognosis of the disease is asked of the examiner in almost every case. When thus questioned by the claimant, an examiner will save himself considerable trouble and annoyance if he will ascertain the prognosis of the attending physician and then confirm that, unless he thinks the time is entirely too long when he may say that in his opinion the individual will have recovered, unless complications arise, in a time somewhat shorter than that given by the attending physician. By giving such a prognosis he causes no annoyance to the attending physician and in addition he probably helps the claimant to recover more quickly, as every sick one is made better by good news of any kind.

REMARKS: All health blanks contain a space which is allotted for remarks by the examiner, and this space should be used to convey any information to the company which has been learned at the examination and has not been put down on the blank at some other part. If an examiner is reporting the result of his examination by letter, he is supposed to put all of his information in a concise and readable form, taking up the different

parts of the case from the beginning to the end and giving the medical director or claim examiner such a good idea of the case that he can almost imagine seeing it himself.

PART III

LIABILITY EXAMINATIONS

Examination of individuals who are not covered by an accident or health policy, but who are injured as the result of negligence on the part of the company or its employees, is the most difficult examination that can be made by a physician for an insurance company or other corporation. In these cases the injured party belongs to a class known as "Public;" in other words, he is not covered by an insurance policy, but the person or the company who injures him does carry a policy exempting them from all liability for any injuries that may be sustained by any one outside of their employ. It can thus be seen that individuals injured under these conditions may have right of action against the corporation to whose negligence they were injured and thus secure a verdict against the corporation or the insurance company which has insured the corporation against such liability. When an examination is asked by a company of an individual so injured, there are a number of points that must be remembered and inquired into, as it is impossible to know at the time of the examination if the case will be settled amicably or will reach a court trial. If the latter, a physician must be prepared to be called upon by the insurance company or corporation and be able to testify from original notes that were taken at the time of the examination, it being impossible to remember the details of the examination when the case does not reach a court trial until two to five years or more have passed. Any notes that are made, even if on a slip of paper, must be retained, and as they are original they can be used as evidence by the company if needed. In these examinations it must be remembered the person who wishes the information for the company is the adjuster and not the medical director; therefore, in order that the report may be of ready use, it must be readable to a layman. The examiner may use technical terms if he wishes, but he must thoroughly explain them. An adjuster

is constantly on the alert to detect claims in which no liability exists, and nothing is more exasperating for him than to have to search among papers and books for the definition of medical terms which have been used and which might have been avoided if the examiner knew differently.

PERMISSION TO MAKE EXAMINATION: It must be remembered in liability accidents that the examiner of the insurance company or corporation has no right to make an examination of the individual unless permission has been secured from him, the attending physician or from the attorney, if the case has reached the hands of such a party. This duty of securing permission does not often depend on the efforts of the examining surgeon, as the company usually makes the necessary arrangements with the injured party or the attorney, and the examiner is asked to confer with the attending physician and make an appointment for the examination. These examinations are sometimes refused by the claimant and also by the attorney, in which case the insurance company or corporation is compelled to wait until the case reaches a court trial, at which time, at the request of the company the judge will order the claimant to be examined by a reputable physician who is chosen by the company for this purpose. When the case is tried in a Federal Court, it is not possible to secure this examination if the attorney objects to it and when secured is only done so through his courtesy.

THE PURPOSE OF THE EXAMINATION depends on the time it is requested. When the company desires an examination shortly after the injury has been sustained, it has in view the object of knowing exactly the extent of the injuries at that time and a proper prognosis from the examiner after he has seen and carefully examined the individual. If the examination is requested some months or years after the accident occurred, the company desires to know the results of the examination at the time it is made, the extent and situation of any existing scars, loss of motion or any impairment of function that has resulted from the injury or in other words it wants to know if there is any permanent disability or deformity existing at the time of the examination, and if so, the examiner must give a full and complete description of the disability or deformity as he finds existing. If he thinks the disability is exaggerated, he should not fail to transmit his opinion to the company. If he believes it is fraudulent, he should endeavor to find evidence of such fraud, and when called

upon in court, be able to show and convince a jury that the fraud exists and the disability as claimed is not really present. Individuals injured under these conditions can claim damages from an insurance company or corporation,—provided the company is liable,—for permanent deformity, such as permanent scars, cuts or burns, mal-union of any bones that may have been fractured or the impairment of any function which may appear permanent.

PLACE OF EXAMINATION: When the individual is to be examined shortly after the accident occurred, the examination can usually be made at the home or hospital, if the person is confined indoors. When the party is able to get around, it is often necessary that the examiner make the appointment for the examination at the office of the attending physician and frequently when the case is in the hands of an attorney, he requests that the examination be held at his office in order that he may be present, as he thinks he must protect his client in every way. Sometimes it is more convenient that the examination be made at the office of the examining surgeon of the company, in which case the attending physician will usually consent to be present at the office of his professional brother. It is very seldom that an examination can be made at the office of the examining surgeon without the attendance of either the doctor or the attorney of the case. When this can be done, it simplifies the arrangement for the examination, but does not make it any the less important that it be properly and thoroughly made.

RELATIONS OF EXAMINER: A physician who examines for an insurance company is employed by them for the purpose of making an examination and submitting a report of an individual on which they may deem such an examination necessary and as a number of liability cases reach a court trial, it is necessary that the examiner make the most thorough examination that he is capable of making and in addition refrain from giving the claimant, the attending physician or the attorney of the opposite side, the benefit of his examination or opinion. Bearing the point in mind that he may be called upon at a later date to testify as to the findings of his examination, he must take notes at the time he makes the examination and keep these original notes for use at a future date if his presence is required in court. The examiner of the company must remember that he is examining the claimant through the courtesy of some one, either the injured party or the attorney. This must not prevent him, however, from making a

thorough examination or at least in attempting to do so, and if refused permission to make an examination of any part he deems necessary, he should make a note of such refusal. If the claimant refuses to answer questions which have a bearing on his injury or disability, the doctor should also report these facts. The examiner should be most courteous in his manner and use all the tact and diplomacy he can command, as by so doing he can generally secure answers to any questions he may ask. Very often the claimant will refuse to answer a question and a few minutes later will answer the same question if put in another manner and during another part of the examination; therefore, while making note of the fact that certain questions have been refused, the examiner should also ask them again and if possible secure answers.

When the attending physician is present at the examination, he will sometimes assist the examiner in every way he can, not only answering questions, but also giving a history of the case as he knows it; other times, the attending physician will simply say, "there is your party, examine him." When the attending physician is courteous and assists the examiner, he also assists his patient, as any physician who is examining for an insurance company is capable of getting the desired information, whether he has the assistance of the attending physician or not. The attending physician at the beginning of the examination may be inclined to refuse assistance to the examiner, but if he is handled with care and in a diplomatic manner, he will usually furnish the desired information before the examination is finished. Just as soon as the attending physician attempts to hinder the examiner in any way by refusing assistance, just so soon is the examiner put on his guard, and not only his ability but his professional honor is at stake, and he is sure to get the information desired. He may have to get it after the examination is over and from another physician who has heard of the case in a round-about way. Information thus secured, of course, cannot be used in court, but it can often be used by the insurance company and be of much service to them.

If the examination is held in the presence of the attorney for the opposite party, it is his intention in most cases to be there for the purpose as he believes, of preventing his client giving any information to the examiner that may be of use to the company. He will therefore in many cases instruct his client not to answer certain questions of the examiner, and while he has the right and

power to have him refuse to answer all questions, such a condition would hardly occur; if it did the examiner could use his own judgment as to continuing the examination or not. Should the examiner refuse to make the examination under such conditions and wait until the case reaches a court trial, he will often be able to obtain more information for his company, provided the injuries are permanent. In cases where the injuries are only temporary, the examiner should use all the good judgment and tact that he can command and make the best examination possible under the circumstances. Attorneys when present at the examination will generally instruct their client not to answer any questions concerning the accident or how it occurred. While this part is not absolutely necessary for the physician, it is always well that he give the claimant's statement as to how the injuries were received. When a claimant, by the instruction of his attorney, refuses to tell how the accident happened, it is for the purpose of denying the company any information that may help to show if they are liable for the accident. An attorney will seldom refuse to permit his client to answer questions concerning his physical condition previous to the accident, and also tell the history of the case after the accident occurred up to the time of the examination. Neither will he very often refuse to allow a physical examination of the parts injured or liable to be concerned in the injury. This applies to women as well as to men.

BLANK: A satisfactory examination of a liability case cannot be made without the use of a blank especially designed for that purpose, or the use of a skeleton key which permits the examiner to secure all the information that is necessary. As there are so many little points in liability examinations that may be overlooked, it is absolutely necessary in such cases that the examiner use a blank, or a form which takes the place of it. On account of the importance of many parts of a liability examination report, the following blank is given and each part is taken up and explained in detail:

Policy Form ..... Claim No. .....

LIABILITY EXAMINATION BLANK.

Name ..... Residence and Place of Examination .....

Date of Examination ..... 190 .... M. Age ..... years. Height ..... Ft. ..... In.

Appearance ..... Nationality .....

Weight ..... pounds. Weight ..... pounds before accident.
Occupation ..... Previous Occupations and where employed .....
.....
.....
Employed by ..... address ..... at time of accident.
Nearest Relative's name .....address ..... occupation .....
Supports .....
(Names and Addresses)
Persons present at examination with address .....
.....
.....
History of previous illnesses .....
.....
.....
History of Previous Accidents .....
.....
History of Surgical Operations .....
.....
Statement of Injured Party .....
.....
.....
.....
Names of Attending Physicians ..... Address .....
Examination of Claimant:
Head .....
Chest .....
Abdomen .....
Back .....
Genital Organs .....
Upper Extremities .....
Lower Extremities .....
Kidneys .....
Pulse .....
Temperature .....
Diagnosis .....
Prognosis. .....
Remarks .....

Name: It is important that the name of the injured party is correctly spelled and that his surname, also any initials, be given.

Residence and Place of Examination: If the examination is made at the residence of the injured party, his address is placed on the blank line following the above subject. Should the examination not be made at his residence, the words "residence and" are crossed out, thus giving the place of the examination, and the residence of the individual must be given below under Remarks.

Date of Examination: Even though the letter or report is dated, there should be stated in the body of the report the date of the examination, also the time of day it is made.

Age is one of the important answers of a liability insurance examination, as the length of time disability will last depends to a certain extent on this, and especially when a claimant is past fifty years of age.

Height: Unless the examiner can estimate the height of an individual correctly, he should measure him.

Appearance: It is always well to state the appearance of the person examined, whether fat or flabby, thin and anemic, robust, weak or other conditions which impress the examiner.

Weight: It is not often that the claimant can be weighed, but nearly the exact weight can be secured by asking how much it is, and then the examiner by using his own judgment as to the truthfulness of the reply, can estimate closely the correct figure. If there is a history of any loss of weight, it is important that the company know how much the party weighed before the accident occurred and also the cause of the loss.

Nationality should always be given, as the adjuster is often furnished additional information by this one point alone.

Occupation at the time the accident was sustained must not be omitted, together with previous occupations, unless there has been a number of changes, in which case occupations covering the previous five years should be noted with the length of time spent in each.

Nearest Relative's Name: If the injured party is a married man, the name of his wife, her occupation and also the residence should be given. This latter is important, because the man may not be living with his wife or supporting her. Should the claimant be a young unmarried person, it is very important that the nearest relative's name be secured and this is especially true when the claimant is not yet of age. In such a case the parents have the right to claim damages for the minor and also for themselves. If either of the parents are living, the name of the father, if alive, should be given; if not the mother's name, and in either case the address and occupation. Should the parents be dead, the name, residence and occupation of the nearest living relative must be secured.

Persons Present: Under this heading the name of any person who is present at the examination, either a part or all the time, should be given, also the residence. This may become very important at a later date if the case reaches a court trial.

History of Previous Illnesses should be secured in every case.

If the sickness has been severe enough to cause disability of a week or more and has occurred within the last ten years, it is necessary to give the date of the disability, the cause, duration, condition of recovery and the name and address of the attending physician.

History of Previous Accidents: If an accident has been suffered at any time since childhood and has left any permanent deformity or disability, the date of the accident should be given, how it occurred, and a description of the parts injured. This description should show exactly any deformity or disability that existed previous to the accident for which the examination is being made. The duration of disability is necessary, as is also the name and address of the attending physician. If a previous accident has not caused any present disability or deformity, it is sufficient to state the date of this accident, the parts involved and the condition of recovery.

Statement of Injured Party: The claimant should be asked to state in his own words exactly how the accident was sustained, first giving the date and hour of the day, the place and exact mode of occurrence. After this is given, the person should state what was done immediately following the accident; if taken to a hospital or other place, the manner of conveyance, how long confinement was necessary in the hospital or residence, together with the length of time in bed. If the individual was unconscious as a result of the accident, the above information can easily be secured from him, as he has probably been told by some one what was done with him immediately following the accident. After securing this information, the examiner should ascertain how long disability lasted after house confinement ended. The date when the party returned to work and the name and address of the attending physician. A claimant must always be asked if he has had one or more attending physicians, as oftentimes in these cases there is an attempt at fraud and the name and address of one of the doctors is withheld. Such a report is of more value if the examiner will state how often the claimant has been seen by the attending physician and the places.

Examination of Claimant: After the history has been taken, the examiner must carefully examine the claimant, first paying particular attention to that part of the body which has been injured in the accident, noting any signs of the injury that exist at that time, any deformity that may be present or any abnormality

of the part. After making an examination of this portion of the body, it is necessary in liability cases that the whole body be examined, beginning at the head and going down. This part of the examination will show any evidence of injury of the head, face, ears, eyes, nose, mouth, throat, chest, abdomen, back, genital organs and the upper and lower extremities. After this part of the physical examination has been made, it is necessary in a number of cases to take the temperature and pulse rate and inquire as to the condition of the kidneys, together with the state of appetite, digestion, ability to sleep and recuperate from fatigue and any other information which may be deemed necessary by the examiner.

Diagnosis: An insurance company always wants to know the diagnosis, and the examiner must be sure that he has made it correctly, and if necessary he should not hesitate to explain any part that he thinks might be obscure to the adjuster, always remembering that the clearer he can get his reports the better satisfaction they will give.

Prognosis is one of the most important parts of the report of a liability examination and should be as near correct as the examiner can make it. There are some cases, however, in which it is impossible to give a prognosis with any degree of certainty, or unless qualified. The examiner, however, should make every effort to furnish this information to the company and should approximate how long the disability will last in days, weeks or months, in addition to stating if there will be any permanent deformity or disability as the result of the accident.

Remarks: This heading is placed on every blank for the reason that it is almost impossible to design one that covers every case, and any information that may be secured which is not covered by the different questions can be placed under this heading. It must be remembered by the examiner that the report of a liability examination cannot contain too many details; if these details have any bearing on the case.

NO PRESCRIBING BY EXAMINER: As stated under accident and health examinations, a physician examining a case for an insurance company should not under any circumstances prescribe, and this is especially important in a liability case for the reason that there is an attempt on the part of the claimant to hold the company liable for damages for an injury already sustained, and if the examiner allows himself to prescribe or even suggest a

certain line of treatment, the claimant has strengthened his case against the company or corporation. Individuals claiming damages from a company that is protected by a liability policy, do not often ask the examining surgeon of the company for any advice, but may do so, and if they do, it should be refused.

NO CRITICISM OF TREATMENT: The examining surgeon should not criticise or venture an opinion as to the correctness of the treatment which is given to a person being examined under this form of policy. It is immaterial to the company whether the treatment is correct or not, for the reason that they may not be liable for damages, and even if they are, the opinion of the examiner for the company would not be accepted in the manner in which it was expressed. If the examiner should criticise the treatment of the attending physician, even though he had good grounds for such action, he would only complicate the case further and make it that much harder for the adjuster to settle. These last two parts of an examination must always be remembered, no prescribing and no criticism by the examiner of the company.

CHAPTER IV

POLICY FORMS

PART I

ACCIDENT POLICIES

Insurance companies are permitted by their charters to assume the risk or liability in a number of different forms. Therefore, companies doing an accident, health or liability business write accident or health insurance policies and also issue insurance to corporations which covers their liability against accidents to individuals who are in no way connected with them. Accident insurance policies as issued by the majority of companies are dated at twelve o'clock noon standard time and are in force for one month, three months, six months or one year from that date, ending at twelve o'clock noon, and are in effect immediately upon being issued and paid for by the purchaser. These policies pay indemnity for death or loss of time due to accidental injuries, when "disability or death results directly and independently of all other causes, from bodily injuries effected solely through external, violent and accidental means." All insurance policies contain a number of conditions explicitly stating how much and under what phases weekly or death indemnity is payable, and these conditions are best described separately.

ACCIDENTAL DEATH: "If such injuries alone result within ninety days from the date of accident in the death of the insured, the principal sum of $..... shall be payable to the beneficiary named in copy of application endorsed hereon, if living, otherwise to the executors, administrators or assigns of the insured." It will thus be seen that if an individual carrying an accident insurance policy meets with an accident whereby death occurs immediately or within ninety days, and is due entirely to the

effects of the accident, the insurance company will be liable for the amount stated in the policy; with, however, any exceptions or conditions that might be contained in the contract.

LOSS OF TWO LIMBS OR EYES: "If such injuries alone result within ninety days from the date of accident in loss by removal of both hands at or above the wrists, or both feet at or above the ankles, or one hand and one foot at those places, or the irrecoverable loss of the entire sight of both eyes, the principal sum shall be payable to the insured in lieu of weekly indemnity as herein provided." Under this part of the contract, an insurance company considers an individual who has suffered any of these losses as practically unfit to follow any occupation, and therefore the full amount of the policy is payable to the claimant, and by such payment the company is released from all further liability and the policy cancelled. Some companies pay weekly indemnity from the date of accident to the date of dismemberment or loss of sight; provided this does not exceed ninety days. Therefore, such policies would pay weekly indemnity from the date of accident to the date of operation if it was done under ninety days, and in addition would pay the face of the policy.

LOSS OF ONE LIMB OR ONE EYE: "If such injuries alone result within ninety days from the date of accident in loss by removal of either hand at or above the wrist, or either foot at or above the ankle, or the irrecoverable loss of the entire sight of one eye, ... part of the principal sum shall be payable to the insured in lieu of weekly indemnity as herein provided." The amount payable for the loss of a hand or foot at or above the wrist or ankle varies, according to the company issuing the policy. Some companies pay the full amount of the policy, others one-half, one-third, one-fourth or one-fifth. Some insurance companies pay weekly indemnity for total disability from the date of accident to the date of operation for the removal of a hand or foot or the irrecoverable loss of one eye, if these contingencies arise under ninety days. This weekly indemnity is payable in addition to the specified amount stated on the face of the policy. In any case when a company pays a specified amount for such a loss, the policy is cancelled and further accident insurance is usually denied the individual, as such a person is an impaired risk and is not capable of protecting himself in an emergency as well as one who has not suffered the loss of a hand or foot or one eye.

INDEMNITY FOR TOTAL DISABILITY: "If such in-

juries alone immediately, continuously and wholly disable the insured from prosecuting any and every kind of business pertaining to his occupation, the sum of $..... per week shall be payable to the insured, as hereinafter provided, but not for more than two hundred consecutive weeks." All accident insurance policies contain a clause similar to the above, which explains itself. Total disability as defined by an accident insurance policy is inability on the part of the individual to perform any part of the daily duties of his occupation. If a claimant whose duties require brain work in addition to other manual labor is confined to the house with a broken leg, such a person can dictate letters and direct his business by telephone and other means, but yet is considered totally disabled and paid weekly indemnity from the date of accident to the time he is able to return to his office and resume part of his work.

INDEMNITY FOR PARTIAL DISABILITY: "If such injuries shall not wholly disable the insured as above, but shall immediately, continuously and wholly disable him from the performance of one or more important daily duties pertaining to his occupation, or if following a period of total disability resulting from such injuries, he shall be in like manner partially disabled (one-fifth, two-fifths, etc.) of the amount per week payable for total disability shall be payable to the insured for the period of such partial disability, but not for more than twenty-six consecutive weeks of partial disability." The amount payable for partial disability varies according to the company issuing the policy. Usually, however, a fixed sum of two-fifths of total disability is allowed for partial, but some companies pay from one-fifth to four-fifths, one-third to two-thirds and one-fourth to three-fourths, according to the amount of disability present. In this clause of the contract it will be seen that partial disability is payable for injuries which cause a claimant to be unable to attend to all the duties of his business, whether totally disabled immediately after the accident or not. If partial disability is not preceded by total, the limit of the company's liability is twenty-six weeks. Partial disability may also follow a period of total disability, provided this period of total does not run to the limit of the policy. If a period of total disability exists for twenty-six weeks less than the limit allowed for total and is followed by partial, this latter form may be allowed for the limit as provided in the policy. In other words, combined

total and partial disability cannot exceed the limit the policy provides for total disability.

COMBINATION BENEFITS: "If such injuries are sustained by means as aforesaid (1) while the insured is riding as a passenger and is in or upon any railway passenger car using steam, cable or electricity as a motive power, (2) or while a passenger on board a steam vessel licensed for the regular transportation of passengers, (3) or while a passenger in an elevator provided for passenger service, (4) or while in a burning building, the amount to be paid shall be double the sum specified in the section under which claim is made." This clause of the policy makes insurance companies liable for double the amount of weekly indemnity in addition to double the specified amounts stated in the policy.

ELECTIVE INDEMNITIES: "If the insured shall sustain an injury by means as aforesaid, which injury is named in the schedule of injuries hereinafter contained, he may elect, subject to all terms and conditions of the policy, to receive the amount of indemnity specified opposite such injury in lieu of all weekly indemnity for either total or partial disability, provided he signifies his choice in writing addressed to the company at its home office within .... days from the date of occurrence of said injury." All accident insurance policies do not contain the above clause, but when it is a part of the contract a claimant can secure an advance settlement of his claim within a short time after the accident occurs, provided he notifies the company within the time allowed by his policy, and this time is usually limited to from ten to fifteen days after the date of accident. If an accident occurs under any condition which doubles the indemnity payable and the claimant elects to accept a certain sum for his claim, he is paid double indemnity as his policy states in the combination clause.

FEES FOR SURGICAL OPERATIONS: "If such injuries sustained by the insured within the term of this policy, and the conditions thereof shall during a period of total or partial disability (as herein defined) resulting therefrom and within ninety days from the date of sustaining said injuries necessitate a surgical operation named in the schedule of operations hereinafter contained, the sum set opposite such operation in said schedule shall be payable to the insured, provided, always, that such an amount shall not be payable for more than one operation as the result of injury or injuries sustained in any one accident. Operations not

named in the schedule of operations are not covered." It will be seen from this part of an insurance contract, that if an individual sustains an accident and suffers total or partial disability, and within ninety days from the date of injury an operation which is named under the schedule of operations is necessary, he is entitled to weekly indemnity for total or partial disability, as the case may be, and in addition is paid the fixed sum for the operation. If some part of the extremities of the body is amputated and the policy provides a specified sum for the loss of such a part, the claimant is entitled to this sum and in addition the amount stated in the schedule of operations for the operation necessary for the removal of the part. When the company pays weekly indemnity from the date of accident to the date of operation, the claimant would also be entitled to this in addition to the fixed sum for the loss of the part and the fixed sum for the operation.

ACCUMULATIONS: "Each consecutive full year's renewal of this policy, if paid annually in advance, shall add ten per cent. to the principal sum insured until such accumulations shall amount to fifty per cent. of said principal sum, and thereafter so long as this policy is maintained in force by annual premium payments the amount insured shall be the original principal sum plus the accumulations." The accumulation feature of an accident policy was added within the last few years by practically all insurance companies for the purpose of preventing lapses and securing payment of the premium annually by making the policy more valuable to the insured the longer he carried it to within a certain limit, and when the premiums were paid annually in advance. This accumulation applies to the principal sum only, and weekly indemnmity for total or partial disability is not increased by this clause.

SPECIAL DEATH INDEMNITY: "If sun-stroke, freezing or hydrophobia accidentally suffered by the insured or the involuntary and unconscious inhalation of gas or other poisonous vapor shall result directly, independently and exclusively of all other causes in the death of the insured within ninety days from the date of exposure or infection, the company will pay the beneficiary herein named $....." The amount of a special death benefit depends on the company issuing the policy; some companies paying the face of the contract and others only paying a stated portion of it, such as one-half, one-fifth, etc. Accident insurance policies do not pay weekly indemnity for disability when

such disability results from any of the causes given under the above clause.

CHANGE OF OCCUPATION: "If the insured is injured such disability results from any of the causes given under the the company as more hazardous than that stated in the policy, while doing work or performing duties belonging to any more hazardous occupation, the company's liability shall be only for such amounts as the premium paid by him will purchase at the rate fixed for such increased hazardousness." This clause in an accident policy is for the purpose of protecting the company against claimants who are insured under a classification which is not very liable to accidents and who change their occupation to one which is more hazardous. This is better explained by an example. If a physician who would be insured as a preferred risk should change his occupation and become a machinist, he would be more liable to accidental injuries. As a preferred risk he would be less liable to accidents, and when they did occur the length of total disability would be short and followed by partial disability; whereas as a machinst, there would be more chance of an accident, and when such a claimant became injured, total disability would persist until the claimant could return to work; in addition a preferred risk would pay less premium than an ordinary risk. It can thus be seen that a preferred risk changing the occupation to one more hazardous should in justice to other policy-holders and the company, pay an increased premium.

ADVANCED PAYMENTS: "Claims for weekly indemnity of more than ..... weeks or ..... months duration shall be payable at the expiration of ..... weeks or ..... months total disability and at intervals of ..... weeks or ..... months thereafter; satisfactory affirmative proof of disability and its continuance being furnished before each payment. Final proofs in all cases to be furnished as provided herein." This clause of an accident insurance policy is for the purpose of making partial payments to a claimant during a period of continuous and prolonged total disability. Thus if an individual suffers from an accident, such as a head injury and total disability lasts a number of weeks or months, the majority of companies will make partial payment of the claim at the end of a definite time; this time being fixed in the policy according to the company which issues it. Some companies make partial payments every eight weeks, others every

ten, twelve, fourteen or sixteen weeks, this depending on the company and the reading of the policy.

NOTICE OF AN ACCIDENT: "Immediate notice in writing of any accident and injury, fatal or non-fatal for which claim can be made shall be given to the company at its home office in ....., with full name and address of the insured, and unless satisfactory affirmative proof of death, loss of limb or sight, surgical operation or duration of disability is furnished in writing within ..... days or weeks from the date of death, loss of limb or sight or surgical operation or termination of disability, or in case of claim for the full limit, final claim is filed within ..... days or weeks from the termination of such limit, the company shall be released from all liability for the payment of any claim based thereon." This clause of an accident policy varies according to the company which issues it. Some insurance companies require immediate notice of the accident and the courts have held that immediate notice is reasonable notice, other companies state a fixed time in the policy in which notice of accident must be given them.. An insurance company always looks with disfavor on a claim for accidental injuries when notice of injury has been received days or weeks after the occurrence of the accident or the termination of disability, and seldom will it entertain a claim under such conditions. The company has no way of knowing through its agents or examiners of the existence of an accident or disability as claimed by a claimant, and whenever such claims are received for total or partial disability, an investigation must be made and this requires a greater expense than if the company was informed at the time of the accident.

IDENTIFICATION: "Upon receipt at the company's head office of the premium for the policy, the insured becomes entitled to the company's identification certificate, and if thereafter while the policy is in force and as the result of injuries covered thereby, is rendered physically unable to communicate with friends, the company will upon receipt of telegraphic or other information thereby transmit the same to relatives or friends and defray any necessary expense not exceeding Twenty Dollars for each One Thousand Dollars of insurance single indemnity, to place him or her in care of such friends." This is a clause that has been recently added to insurance policies, and while the company is willing to do as it says under this part of the contract, such a contingency seldom arises.

BENEFICIARY INSURANCE: Accident insurance policies as now written contain a number of special offers, and the beneficiary clause is not included in this, if the policy carries the accumulation feature. A policy-holder has the choice of accepting an accident policy which accumulates the longer he carries it or one in which the beneficiary is insured for certain accidents. This beneficiary clause varies in different companies, but the following is a fair example: "In lieu of the ten per cent. addition provided for in the policy, the following contract of insurance is issued on the person named as the beneficiary in the schedule of warranties herein contained. The said beneficiary is insured against disability or death resulting directly and independently of all other causes, from bodily injuries sustained through external, violent and accidental means, suicide,—sane or insane—not included, and received by the said beneficiary while a passenger in a passenger elevator; or in or on a railway conveyance propelled by steam, electricity, compressed air or cable and provided by a common carrier for passenger service; or in consequence of a burning building while said beneficiary is therein, in the following sums to wit: If said injuries received solely under the conditions set forth herein shall within ninety days from the date of accident result in any one of the following disabilities, the company will pay the amount set forth in the following schedule or a proportionate share thereof, as provided herein." Then follows a schedule in which a fixed sum is allowed for certain losses,—amputations, fractures and dislocations. It will be noticed that this beneficiary clause does not pay weekly indemnity to the beneficiary when injured, and in order that the beneficiary may receive indemnity for specified injuries, this person must be injured under conditions as set forth in the policy.

CANCELLATION: "The company may cancel this policy by mailing copy of cancellation to the insured's residence address as given in application herefor, with its check for the unearned part, if any, of the premium." All accident insurance policies contain this or a similar clause, for the purpose of terminating an accident policy which may be secured by fraudulent means or when the company decides for any other reason that it does not care to remain on the risk. This is an important condition of the policy from the standpoint of the company and is one which holds in courts of law.

MEDICAL ATTENTION: All accident insurance policies

require the attendance of a registered and qualified physician during the period of disability, and if this part of the policy is not complied with, the company has the right to refuse the payment of indemnity.

MEDICAL EXAMINATION: When an individual signs an application for an accident policy and accepts it, he gives the company the right to have any of its medical representatives make an examination of his person or body as often and whenever the company deems it necessary. This is an important clause from the standpoint of the examiner of the company, for the reason that the claimant has waived his rights of an examination, and therefore the examiner of the company can make the examination whenever he desires and without the presence of the attending physician. Medical ethics require courtesy among medical men, and the code of ethics should always be adhered to whenever possible, but most physicians understand and expect that the medical examiner of an insurance company will make an examination of their patient without their knowledge, as it would be almost impossible for an examiner of an insurance company to communicate each time with the attending physician and have him present when the examination is made.

REMARKS: Accident insurance policies as issued by the large companies pay Five Dollars per week indemnity for each One Thousand Dollars of insurance carried by preferred risks. Thus if an individual carries Five Thousand Dollars of insurance against accidental death, he is entitled to Twenty-five Dollars per week for disability if injured in the usual ways; if injured under the doubling clause, the weekly indemnity would be Fifty Dollars per week. The cost of this insurance depends on the occupation of the policy-holder and is based on the hazard to accidents that exists. Preferred risks are charged Five Dollars per year for One Thousand Dollars of accidental death benefit, and in addition to this the weekly indemnity is also payable. Other risks pay from this rate, as high as Twenty or Twenty-five Dollars per One Thousand Dollars of death indemnity, the cost of this being based on the occupation of the insured. The premium on these policies is payable annually, semi-annually or quarterly in advance, but unless paid annually, the accumulation feature of the policy is not included and neither is the beneficiary clause. Industrial accident insurance companies issue policies which pay a small amount for an accidental death and a certain amount of weekly indemnity

when disability is caused by accident or disease. These companies generally charge One Dollar per month for the insurance, and this is payable either weekly or monthly, according to the custom of the company that issues the policy.

PART II

HEALTH POLICIES

Health policies as issued by accident insurance companies consist of two forms known as the general health or disability policy and the special health policy. A new form of health policy has recently been issued by one of the large insurance companies, and is known as the unlimited health policy. This policy provides a new feature in health insurance,—namely,—it pays for partial disability following an illness which causes total disability.

THE GENERAL HEALTH OR DISABILITY POLICY pays indemnity for disability due to any disease, with perhaps one or two exceptions, such as diseases of venereal origin or disability due or caused by over indulgence in alcoholic stimulants. These policies cost preferred risks Seven Dollars per year for each Five Dollars of weekly indemnity when the insured is between eighteen and fifty years of age, and Nine Dollars per year for each Five Dollars of weekly indemnity when the age is fifty to fifty-five years inclusive. Some insurance companies have an age limit of sixty years for the issuance of general health policies. The premium on a health policy is paid annually in advance, when the policy is issued by one of the larger companies. Industrial accident insurance companies collect their premiums also in advance, but collect them weekly or monthly. These policies do not go into effect for disability until some days after the date on which they are issued. This time varies with different companies; usually fifteen days is the time allotted by the larger accident companies. Industrial accident companies do not put their health policies into effect until sixty to ninety days after the date of issuance.

THE SPECIAL HEALTH POLICY is issued by all of the large companies and pays weekly indemnity when the insured is

totally disabled from performing the duties of his occupation by the diseases named in the policy. These policies cost Ten to Fifteen Dollars a year, the amount being payable in advance, and pay Twenty-five Dollars per week for disability. Health insurance will not be issued on any individual unless that person is carrying an accident policy in the company to which he applies for a health policy. A medical examination is never required by an insurance company before the issuance of a health policy, unless the application shows something that would make such an examination necessary or information unfavorable to the applicant is in possession of the company, when a medical examination is demanded before the policy is issued.

THE UNLIMITED HEALTH POLICY was recently placed on the market by one of the large insurance companies. In addition to paying indemnity for an illness which causes total disability, this policy allows partial disability following total disability on account of illness if the insured loses at least one-half of the business time each day on account of the disease which causes the disability. This is the first policy issued by any insurance company in the United States which pays for partial disability under a health policy,—all of the others paying partial indemnity for total disability, but usually not requiring confinement to the house. This policy as just issued, while it pays total and partial disability for an illness, is sold at an advance over the price usually asked for a regular health or disability policy.

COMBINATION POLICIES: General health policies are often combined with accident policies, the company issuing one policy covering disability for accident or disease, and these policies are known as *Combination Policies.* This form is the one usually purchased by an individual when a general health policy is carried, for the reason that he must carry accident insurance, and therefore it is easier to combine the policies under the name of a combination policy, which pays disability for an accidental death and weekly indemnity for accidents and diseases. Under general health policies the following conditions or similar ones are usually found.

PERMANENT DISABILITY: "If the insured shall contract during the term of this policy any disease that shall not result in death, but shall result independently of all other causes within one year from the date of this insurance, in the irrecoverable loss of the sight of both eyes or any permanent paralysis

whereby the insured shall entirely lose the use of both hands or both feet or of one hand and one foot and on account of either of said conditions be permanently disabled from engaging in any work or occupation for wages or profit, the company will pay to him upon the filing at the company's home office, of satisfactory proofs of the continuance for fifty-two consecutive weeks of such blindness or paralysis $..... of the principal sum, which payment shall terminate the policy." This clause obligates the company to pay a certain sum of money for permanent disability when loss of sight of both eyes is suffered, or from permanent paralysis when it occurs to two or more of the extremities. Some companies do not pay this indemnity until the end of the second year. This would require one year of total disability from the above causes and then another year following before the indemntiy would be payable by the insurance company. This is for the purpose of protecting the company against the payment of a claim for temporary disability, even though it may last almost two years.

TOTAL DISABILITY: "If the assured shall suffer from bodily disease or illness not hereinafter excepted, and such disease or illness shall wholly disable and prevent the insured from performing any and every kind of duties pertaining to his business or occupation, the company will pay to him the weekly indemnity above specified for the period of such disability during which time he shall necessarily be confined to the house, and any disability of less than seven consecutive days or in excess of twenty-six weeks is not covered." Some general health policies pay indemnity for disability when less than a week is lost and some do not require house confinement as one of the conditions of the payment of total disability, but they usually limit the liability to twenty-six weeks or less. An insurance company will not pay total disability to an individual unless a legally qualified and licensed physician has been in attendance during the period of total disability. Some companies pay double the amount of weekly indemnity when the claimant is confined in a hospital during the illness. Industrial accident insurance companies do not pay total disability under the health feature of their policies until after the individual is totally disabled and confined to the house for one week, that is to say, in order to receive one day of total disability under the health policy, he must be confined to the house eight days. These companies will pay the first week of disability when the individual is confined to the house by an illness, if he pays an

additional premium, and this is usually Twenty-five or Fifty Cents per month.

PARTIAL INDEMNITY FOR TOTAL DISABILITY: This clause is sometimes included in a general health policy, and if present it pays a certain percentage of the weekly indemnity for total disability when the claimant is not confined to the house or when he is recuperating after an illness which has caused total disability and house confinement. The amount paid is usually two-fifths of total disability and the time is limited; a short time only being allowed for this form of indemnity due to total disability while recuperating.

SURGICAL INDEMNITIES: "If such disease or illness shall necessitate an operation specified in the schedule of surgical operations and such operation is performed by a legally qualified surgeon, the company will pay the insured, in addition to any other indemnity to which he may be entitled, the indemnity stipulated in said schedule for such operation, provided the operation occurs within ninety days of the contraction of such disease or illness, the company not to be liable for more than one operation necessitated by such disease or illness." All disability policies allow a fixed sum for surgeons' fees when such become due under the conditions of the above clause, and this amount is payable in addition to the weekly indemnity allowed by the policy.

QUARANTINE INDEMNITY: "If while this policy is in force the insured is exposed to any disease or illness and in consequence of such exposure is quarantined by a legally qualified public officer, and in consequence of such quarantine is rendered continuously unable to transact any and every part of his business duties, the company will pay the insured the weekly indemnity provided hereunder during such period of quarantine not to exceed ..... consecutive weeks, provided proofs of such quarantine are furnished to the company at its home office within ..... weeks of the termination of the quarantine." This clause is usually included in general disability policies and when found a part of such it pays indemnity for a specified number of weeks when disability is due to this cause. This time is seldom over ten or twelve weeks and notice of such quarantine must be sent the company within a specified or reasonable time, the same as required by an accident insurance policy for notice of injury.

SPECIAL HEALTH POLICY: A special health policy pays for total disability when the insured is totally disabled and

prevented from performing any of the duties of the occupation, provided the disability is caused by certain diseases or illnesses which are enumerated in the policy. These diseases vary according to the company which issues the insurance; some companies paying indemnity for disability arising from any one of ten or fifteen diseases, while others include as high as thirty or forty diseases. This policy costs Ten to Fifteen Dollars per year for Twenty-five Dollars of weekly indemnity for ages under fifty years and the limit of liability on the part of the company is twenty-six weeks. A number of diseases which are included in the policy are not very prevalent. A special health policy does not always require continuous house confinement as one of the conditions under which indemnity is payable, but usually pays the insured for the time that he is totally disabled by any of the diseases named in the policy.

CHAPTER V

INJURIES AND DISEASES OF THE HEAD AND NECK CAUSED BY ACCIDENTS AND RESULTING IN DISABILITY

PART I

INJURIES TO THE SCALP

ABRASIONS

INFORMATION: Abrasions of the scalp are not seen frequently except in individuals who have become bald through age or other reason, when an abrasion can be sustained accidentally by the head coming in violent contact with a harder substance. On account of the round contour of the skull, abrasions of the scalp usually involve only a small area and when such an injury occurs there is danger of an infection following.

SIGNS AND SMYPTOMS come on at once after the abrasion has been sustained and consist of a swelling which is usually out of proportion to the injury received. The skin is broken and slight bleeding follows, this soon coagulates and forms a scab over the abraded surfaces, headache is complained of and sometimes pain in the eyes after continued use for any length of time. If the blow which produced the abrasion has been severe, there may be a slight concussion of the brain, in which event headache will persist from three to seven days and in addition there may be some nausea or vomiting. For injuries involving the brain see Concussion of the Brain.

DIFFERENTIAL DIAGNOSIS: *Fraudulent Claims* for an accidental injury alleging an abrasion of the scalp as the cause of disability are very rare, although it is possible for an individual to claim a brain injury following a more or less severe abrasion; in

which event notice of injury will probably not be received by the company until after evidence of the abrasion had disappeared and no chance would be given the company to demonstrate that disability existed; symptoms only being present when the examination is made.

Eczema Capitis in the erythematous stage may sometimes be claimed as the result of an abrasion, but usually this disease will cover a larger area of the scalp than would an abrasion. This form of eczema may have some few openings with slight bleeding and thus resemble an abrasion which has been received accidentally, but in this disease there is almost always a history of previous attacks, and each attack is accompanied with intense itching which is not present when the inflammation is caused by an accident, neither is there often any evidence of recent bleeding, such as is found in an abrasion.

COMPLICATIONS: *Infection* of an abrasion of the scalp may follow and more frequently involves that part which is covered with hair. When an abrasion occurs on the scalp of an individual which has been denuded of hair, there is less chance of an infection. Disability often results when abrasions become infected and this would not occur if the wound had remained aseptic.

Erysipelas: Any injury which breaks the skin on any part of the body may be followed by this disease. If such an attack occurs, the beginning is from two to seven days after the injury has been received, and when the disease follows small wounds, it is generally lighter than if larger surfaces had been involved.

TOTAL DISABILITY for an abrasion of the scalp should not be allowed unless there have been multiple abrasions and these have become infected. In a moderately severe abrasion of the scalp occurring to an individual whose occupation requires constant contact with people, this disability may last from 3 to 7 days; after which time the bandages that have caused the disability can be removed with safety and the individual return to his occupation. Claimants whose duties do not require contact with people, are seldom totally disabled more than from 1 to 3 days. If an ordinary infection follows, this period of total disability may last from 1 to 2 weeks. Should erysipelas develop in the wound, total disability lasts from 2 to 3 weeks in mild cases and severe ones from 3 to 5 weeks before recovery is complete.

PARTIAL DISABILITY is not deserved in any case in which an abrasion of the scalp has occurred.

EFFECTS: After an injury as above described has been healed,—even though it has been attended with complications,—there rarely remains any evidence of the accident and the individual is insurable for any kind of a policy as soon as recovery has been complete.

CONTUSIONS OF THE SCALP

INFORMATION: Contusions of the head and scalp are commonly seen, but usually disability does not result unless the injury has been very severe or another part of the body is also involved. Frequently a contusion in this situation is accompanied

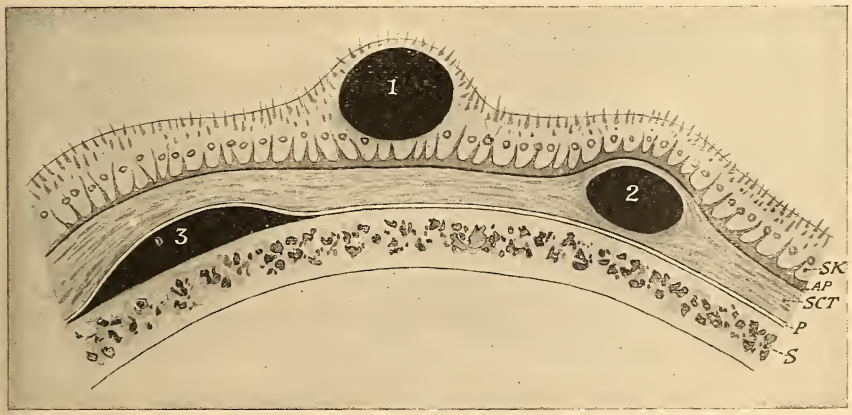


FIG. 1.—LOCATION OF VARIOUS HEMORRHAGES IN THE SCALP. (Eisendrath).

SK and AP represent the cutaneo-aponeurotic layer; P, pericranium; S, skull; 1, superficial hematoma or confusion in skin proper of scalp; 2, hemorrhage or pus-formation in subaponeurotic layer; 3, subpericranial hemorrhage.

by an abrasion, and on account of the abrasion an infection may follow. Fraudulent claims are sometimes made against an insurance company when the disability is alleged to have been caused by a swelling accidentally received; such a swelling when present may be due to a tumor or cause other than a contusion.

SIGNS AND SYMPTOMS: Immediately after a contusion to the scalp, the individual is more or less stunned. Then follows a swelling which is due to hemorrhage into the injured part, and later, on account of the hemorrhage, discoloration takes place. There is tenderness on pressure, headache, and in many cases nausea and vomiting; especially is this true if the contusion has

been severe enough to cause any brain injury. For injuries of the brain following contusions, see Concussion of the Brain.

DIFFERENTIAL DIAGNOSIS: *Depressed Fracture* of the skull may complicate a contusion. If this condition exists, the edge of the fractured bone is usually depressed below the level of the contour of the skull, while a hematoma due to a blow is situated above or on top of the skull. Shock is always present in a fracture of the skull and may persist for some time, but never follows simple contusions.

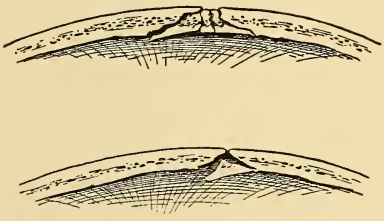


Fig. 2.—Splintering of inner table of the skull; cross-sections diagrammatic; a, Usual form of fracture; b, a linear fracture more extensive internally than externally. (Scudder)

COMPLICATIONS seldom follow a slight contusion of the scalp. If the blow has been a severe one and the brain lacerated or torn, complications may arise; in which event see Concussion of the Brain.

Septic Osteomyelitis may follow a hard blow to the scalp, when the signs of the localized inflammation will become very severe and be attended with constitutional symptoms, such as loss of appetite, chills, and irregular and high fever.

Necrosis of the bone underlying the contusion is possible; if this supervenes the prognosis is bad and a release should be obtained by paying a sum that seems unreasonable, but which is for the best interests of the company.

Boils may sometimes be claimed as the result of a blow and indemnity demanded under an accident policy, but as they seldom follow a contusion, it is not often that indemnity is payable.

An Abscess of the scalp may follow a contusion, and if it forms beneath the pericranium, it is limited in area to the outlines of the bone of the skull over which it is found. Should the abscess develop between the occipito-frontalis muscle and the pericranium, it may travel over the whole top of the skull. Locally an abscess is characterized by swelling and a dusky discoloration which does not pass through the different stages of a discoloration resulting from extravasated blood. The temperature is generally elevated when an abscess is situated in this region; in addition there is a throbbing pain which becomes worse when the individual is in a recumbent position.

Tumors of the scalp are usually sebaceous cysts and some-

times the sac is ruptured by a slight blow on the head, in which case disability or the resulting abscess, if it occurs, is said to be due to a contusion, and indemnity is claimed under an accident policy. Unless the sac has been ruptured in some manner, there should be no mistaking a tumor for a contusion.

TOTAL DISABILITY does not follow slight contusions of the scalp, unless there is an accompanying abrasion, and this becomes infected. In these cases total disability may occur and last from 3 to 7 days. If an abscess develops as the result of a contusion in this region of the body, total disability ensues and lasts from 1 to 2 or 3 weeks, depending on the size and location of the collection of pus, but this disability does not begin until from five to ten days after the accident has been sustained.

PARTIAL DISABILITY is not payable for contusions of the scalp unless there has been a resulting brain injury, when it is due to the damage done inside of the skull and not to the scalp alone.

EFFECTS: Simple contusions of the scalp produce no bad effects, and have no bearing on the insurability of an individual for any kind of a policy.

INCISIONS OF THE SCALP

INFORMATION: Incised wounds of the scalp are produced by some sharp instrument and result in cleanly cut edges of varying length and depth, and if properly treated, healing is rapidly accomplished on account of the large blood supply to this part of the body.

SIGNS AND SYMPTOMS: Severe and sharp pain occurs at the time an incision is made and this in turn is followed by hemorrhage, which depends on the size of the incision. If the cut is long and deep, hemorrhage is a prominent sign and persists for a considerable time. Gaping of the wound edges is almost always met with in this kind of an injury.

COMPLICATIONS: *Erysipelas* may follow an incised wound, and if it does, disability will be caused by the complication and not by the incision, and the duration of disability will be governed by the complication.

TOTAL DISABILITY follows in preferred risks when an incision of the scalp has been sustained, and lasts from 3 to 7 days; if the wound has become infected, this disability may per-

sist from 7 to 14 days. Total disability in this class of risks is not due to the injury alone, but is caused by the party refusing to go to his place of business with the head covered by a bandage. Individuals insured under the ordinary classification should not be totally disabled more than from 1 to 3 days unless infection follows, when this disability may recur after the occupation has been resumed for several days, and lasts from 3 to 7 days.

PARTIAL DISABILITY is not deserved under an accident policy to any class of risks suffering from an incision of the scalp.

EFFECTS: A scar usually results from an incision of the scalp, but unless the wound suppurated and healing was delayed, it is so small that it rarely shows. This is especially true if the incision has occurred in a part that is well covered by hair.

LACERATIONS OF THE SCALP

INFORMATION: Lacerated wounds of the scalp are usually associated with contusions and are produced by any blunt instrument coming in violent contact with the skull and forcibly tearing asunder its covering. The cut in a laceration is usually ragged, and in many cases foreign particles are carried into the tissue and this results in an infection which prolongs disability.

SIGNS AND SYMPTOMS: The edges of a lacerated wound are irregular, gapping, shreddy and covered with blood clots. Hemorrhage is usually slight on account of the laceration and contusion of the tissues, which produces a larger injured surface and thus allows the blood to coagulate. Lacerated wounds of the scalp produce greater shock than do incised wounds, but there is less pain, which is of a dull and aching character. When the tearing has been very severe and extends over considerable area, reactionary and secondary hemorrhages occur; these appear about the time the damaged tissue sloughs and is thrown off by nature.

COMPLICATIONS: *Infection* is more apt to occur in a lacerated wound on account of foreign bodies which may be carried into the cut, than if the wound edges have been cleanly separated.

Erysipelas may also follow a lacerated wound and is more prone to do so in this portion of the body than in others. When it follows, this inflammation begins some few days after the wound has been received.

TOTAL DISABILITY: Preferred risks suffering from a

laceration of the scalp of from one to three inches in length and without brain symptoms, require from 3 to 7 days of total disability before resuming the duties of their occupation. If an infection follows, this disability may last from 7 to 14 days. Ordinary risks usually demand from 2 to 7 days of total disability without regard to infection.

PARTIAL DISABILITY following a laceration of the scalp is not often demanded, and unless there has been more or less concussion to the brain and the individual is a preferred risk, this disability should not be allowed. If it is necessary to pay partial indemnity for any reason, from 7 to 10 days are generally sufficient.

EFFECTS: Lacerations that are long and deep usually leave permanent scars, the prominence of which depends on the amount of tissue lost at the time of the accident and the degree of infection. The hair does not grow from a scar, but it is usually covered by that from surrounding parts.

PUNCTURED WOUNDS OF THE SCALP

INFORMATION: Punctured wounds of the scalp which are produced by sharp-pointed instruments, such as pins, needles, trocars, etc., produce small wounds and permit a quick recovery, unless a part of the instrument has been broken off and remains in the wound or an infection follows. Wounds made by daggers are generally punctured and incised wounds combined, the incision usually being made when the instrument is withdrawn.

SIGNS AND SYMPTOMS: Punctured wounds of the scalp produce few symptoms; slight hemorrhage, sometimes a headache lasting a short time, retraction and turning in of the wound edges and later an infection may follow with a discharge of pus. Punctured wounds of the scalp which become perforating wounds of the skull, produce evidence of brain injury, and for a description of this see Punctured Wounds of the Skull.

COMPLICATIONS: *Infection* is the most common complication following a punctured wound of the scalp and is due to improper cleaning of the puncture on account of its nature.

Erysipelas may develop in any punctured wound and cause disability where none would exist if the puncture healed by first intention.

Tetanus is a complication that often follows this form of injury

to the scalp when it has been caused by any instrument that may carry the germs of this disease. It is more likely to follow a wound of this kind when the injury has been caused by a rusty nail or some implement which is in use around a barn yard. Wounds from fire-arms, especially from wads of blank cartridges, frequently produce the disease.

TOTAL DISABILITY does not follow from uncomplicated cases of punctured wounds of the scalp in any class of risks. When a complication ensues, this period of disability will depend on the cause,—if an ordinary infection,—a preferred risk may demand from 3 to 7 days. Individuals insured under the ordinary classification seldom require any total disability, even if a punctured wound of the scalp becomes infected. If erysipelas or tetanus develops, see the description under either of these headings for the length of disability.

PARTIAL DISABILITY is not deserved in any class suffering from a puncture to this part of the body.

EFFECTS: Punctured wounds of the scalp which heal by first intention and are not infected, produce small scars. If the puncture penetrates the skull, or erysipelas or tetanus develops, the individual is not insurable for any kind of a policy for a considerable time after the injury has recovered, this depending on the nature of the complication.

BURNS AND SCALDS OF THE SCALP

INFORMATION: Burns and scalds of the scalp result from a number of causes, the most common of which are exposure to high heat, flames, boiling liquids, steam, over-heated metals, acids and caustic alkalies. Scalds from liquids and steam—unless severe —do not cause destruction of the hair follicles over the area involved, but when flames, heated metals or acids come in contact with the scalp and produce a severe burn, they are usually destroyed, resulting in permanent loss of the hair. Severe burns to the scalp may result in inflammation of the brain and this end in death.

SIGNS AND SYMPTOMS depend on the area of the burn or scald. There is, however, in all cases, an inflammation with swelling, accompanied by a blister or carbonizing of the parts involved. Slight injuries of this class produce pain and in nervous individuals some shock. Severe burns or scalds produce a

decided shock, with much pain, swelling and loss of hair over the affected parts.

DIFFERENTIAL DIAGNOSIS: *Pemphigus* is an inflammatory disease of the skin characterized by blebs or bullæ which vary in size. This disease may sometimes be claimed as a burn from the result of an accident, but the fact that these blebs are not surrounded by an area of inflammation and usually appear in crops and are attended with intense itching and burning and are found in individuals whose system is greatly debilitated or in women during menstruation or pregnancy, makes the diagnosis not difficult.

COMPLICATIONS: *Infection and Suppuration* are frequent sequelæ following a burn or scald to this part of the body.

Erysipelas is liable to develop after a burn or scald and thereby prolong the period of disability.

Pyemia and Septicemia are complications which arise and greatly prolong disability following these injuries.

Tetanus may be contracted, although it is not usual for this complication to arise after a burn or scald; if it does, disability may be greatly prolonged if the individual survives, but usually death ensues in a short time.

TOTAL DISABILITY: Preferred risks suffering from a moderately severe burn or scald of the scalp which does not involve a large area, require from 7 to 10 days absence from work. If the burn is severe, but small in size and in the same class of risks, from 1 to 2 weeks are necessary. When the burn is deep and involves a large portion of the scalp, total disability in any class of risks lasts from 4 to 6 or 8 weeks. Individuals insured under the ordinary classification and suffering from a moderately severe burn to this part of the body, usually demand from 3 to 10 days only. If skin grafting is necessary, each operation generally prolongs disability from 2 to 3 weeks.

PARTIAL DISABILITY is not often necessary in injuries as above described in any occupation, unless the burn or scald has been very severe and total disability has lasted a considerable time. In which event partial disability of from 1 to 3 weeks may be demanded on account of the weakened condition following this period of total disability.

EFFECTS: Burns and scalds of the scalp which do not go beyond the formation of blisters leave no permanent scars. When the deeper tissue has been destroyed, the resulting permanent

scar is at first red and later becomes white, blanched and contracting, and over this surface the hair does not grow. There is no impairment of insurability of an individual who has suffered from a severe burn or scald of the scalp alone. Complications which may have arisen will determine the insurability for any kind of a policy.

PART II

INJURIES TO THE FACE

ABRASIONS

INFORMATION: Abrasions of the face are usually the result of the skin of the face coming in violent contact in a sliding manner with a substance more or less hard and rough. When the skin is broken and abraded over a large area, there are usually a number of smaller abrasions surrounding the main one. Infection may follow in one or more of the open places of the skin when the signs and symptoms are aggravated and the resulting scar, if any, is more noticeable. It also causes a prolongation of the healing of the wound and may produce disability when it is not already existing.

SIGNS AND SYMPTOMS: Immediately following an abrasion which has been received accidentally, there is a swelling and redness of the injured parts which does not last more than twenty-four to forty-eight hours, the skin is broken in a number of places and from these points a slight bleeding ensues; later a scab forms over the abraded surface, the swelling and redness disappear and unless the wound has become infected, healing proceeds until the process is completed. Should an infection occur, pus forms and discharges from a number of small points, but usually this does not take place in an abrasion of the face; such injuries generally healing by first intention.

DIFFERENTIAL DIAGNOSIS: Abrasions of the face are seldom produced intentionally, for the reason that an individual who intends to defraud an insurance company selects another part of the body for producing signs of an injury. Abrasions in this position, however, may be mistaken for certain diseases, and it is important that the diagnostic points be known.

Erythema Simplex is an acute affection of the skin which produces a slight local increase of temperature and discoloration in spots, which are sometimes small and isolated, and at other times large and diffused over a considerable area. In this disease, however, there is a slight itching and burning of the skin which is not present in an abrasion at the same time. Abrasions usually have a burning sensation immediately after being sustained, and as the healing process proceeds, a slight itching may be complained of, but rarely.

Erythema Intertrigo is an acute congestion of the skin characterized by an abraded surface with heat, redness, perspiration and maceration of the epidermis. This condition of the skin is most

Fig. 3.—Eczema of the face. (Stelwagon).

frequently encountered when two surfaces are brought in contact with each other, but may sometimes be seen in connection with the face or neck. The perspiration which accompanies this inflammation and the maceration of the skin are not found when an abrasion occurs and are sufficient for making a diagnosis between the disease and an accident.

Eczema is one of the most common diseases of the skin and presents the general characteristics of a catarrhal inflammation, including diffuse persisting redness, heat, swelling and a discharge of serous fluid which becomes incrusted. Eczema in the pustular stage with few scattered pustules may sometimes be mistaken

for an infected abrasion, but careful questioning will soon establish the proper diagnosis.

COMPLICATIONS: *Infection* rarely follows an injury as above described, but when it does disability may be prolonged several days or more.

Erysipelas is one of the most frequent complications that may follow an abrasion to the face, and usually begins from two to seven days after the injury has been received, first showing itself by redness around the alæ of the nose and spreading from these points until it involves more or less of the face.

TOTAL DISABILITY rarely results when an abrasion of the face is the only injury sustained, unless the accident has been very severe and injured a large area; in which event an individual who is classed as a preferred risk will usually not return to his occupation until his face is presentable, and this requires from 3 to 7 days; should an infection follow, this total disability lasts from 1 to 2 weeks. If the claimant is insured under an ordinary classification and his occupation does not require contact with people, total disability seldom lasts more than from 1 to 3 days. When an abrasion of the face is complicated with an attack of erysipelas, total disability lasts from 2 to 3 weeks in ordinary cases and in more severe ones from 3 to 5 weeks may be necessary before the individual can resume his occupation.

PARTIAL DISABILITY is not allowable to any class of claimants, for the reason that an individual who can do any part of his work, can do all of it.

EFFECTS: There is seldom any resulting scar unless the abrasion has been very extensive and has been followed by an infection, when there may be a superficial scar which is red at first and gradually fades, even in these cases all effects of the abrasion usually disappear in two to three months.

CONTUSIONS OF THE FACE

INFORMATION: Contusions of the face are produced by blows which are received while the body is in an upright position and also when the face strikes a hard substance in falling. Insurance companies will not pay for disability resulting from blows to the face or head which are received in an altercation, but if an individual is assaulted by unknown persons and disability results

from contusions or other injuries, indemnity is payable under an accident policy.

SIGNS AND SYMPTOMS: Immediately after a blow has been received, swelling and redness appear, and this is especially marked when the injury has been received in the region of the eyes or mouth. Swelling may be so great when the blow has been over an eye, that this organ will be completely closed. There is pain and tenderness over the injured part and in from ten to twenty-four hours discoloration ensues—being more marked in the dependent area—and remains three to seven days or longer.

DIFFERENTIAL DIAGNOSIS: *Tumors* of the face resemble a contusion and especially when there is an area of inflammation surrounding the mass, but in such cases the well marked signs of discoloration which appear from a blow are not apparent at any time.

Parotitis: Inflammation of the parotid gland may sometimes be claimed and mistaken as the result of an accident, especially if there is a history of a blow having been received in the region of the ear. Excessive swelling of this gland extends and involves the side of the face, but there is no discoloration following and the fact that the gland of the opposite side is frequently affected, and in some cases the testicles, serve to make a differential diagnosis.

Bright's Disease causes swelling under the eyes, which may be very extensive, but there is no discoloration following, and in addition there is evidence of this disease in the urine and the swollen abdomen and ankles

TOTAL DISABILITY: Preferred risks suffering from a contusion to the face usually require from 2 to 7 days of total disability, for the reason that pride keeps them from their occupation. Ordinary risks are not entitled to this disability from a simple contusion.

PARTIAL DISABILITY should not be allowed to any class of risks, unless the eyes or ears have been involved and the occupation requires considerable use of one or both; in which case from 2 to 7 days are sometimes necessary.

EFFECTS: None.

INCISIONS OF THE FACE

INFORMATION: Incisions of the face usually result from

cuts by an instrument with a sharp edge and often from glass; unless the incision penetrates the mouth, healing is quickly accomplished. Incised wounds of the face when received in fights, are not covered for disability under an accident policy, and indemnity is not payable when the wound is sustained under such conditions.

SIGNS AND SYMPTOMS: At the time the incision is made or immediately following it, there is a sharp stinging pain, with hemorrhage and separation of the wound edges. If the incision is deep enough to penetrate the nasal or bucal cavities, evidence of communication between them and the external surface is apparent.

COMPLICATIONS: *Infection* may follow an incised wound of the face and cause a prolongation of the disability, but this complication is not usual unless the cut penetrates into one of the cavities, when the wound usually becomes infected and the duration of disability is uncertain.

Erysipelas and *Tetanus* may also occur as complications.

TOTAL DISABILITY following incisions to any part of the face which do not penetrate either one of the cavities and which are not infected, require from 7 to 10 days when seen in preferred risks. Infection increases this time about 1 week. Individuals in the ordinary class usually demand from 2 to 5 days of this disability. When either of the nostrils or the bucal cavity is opened by an incision, total disability lasts from 2 to 3 weeks in preferred risks. Ordinary risks generally require about 2 weeks under these conditions.

PARTIAL DISABILITY is not deserved by any class of risks.

EFFECTS: A scar follows an incision to any part of the face and is more or less prominent according to its size, depth and location, and whether an infection followed; usually, however, scars are slight and do not cause much disfigurement, unless the cut is a long one and no sutures have been applied, in which case an unsightly scar results.

LACERATIONS OF THE FACE

INFORMATION: Lacerated wounds of the face are more or less contused and may be produced by any substance which strikes the face hard enough to break the skin and injures the un-

derlying tissue. Disfigurement follows severe lacerated wounds of this part of the body, and especially if an infection occurs and a prolonged period of suppuration ensues.

SIGNS AND SYMPTOMS: Evidence of the laceration, the cut generally extending in different directions followed by hemorrhage, pain, swelling, discoloration and frequently infection.

COMPLICATIONS: Any wound of the face which ruptures the continuity of the skin is liable to become infected by pus organisms, erysipelas or tetanus, and if any of these develop, the disability is prolonged according to the infection.

TOTAL DISABILITY should not result from this class of wounds of the face, but individuals who are insured in the preferred classes, such as store clerks, office help, and men engaged in different professions, usually require from 5 to 10 days of this disability. This is due to the fact that this class of people will not return to their occupation wearing a bandage on the face. Ordinary risks may require from 2 to 7 days of total disability when the laceration is long and deep. If infection follows, this disability in all classes is prolonged about 1 week.

PARTIAL DISABILITY is not deserved by any class of risks when a laceration of the face has been sustained, unless erysipelas or tetanus has followed, when it may be necessary in all classes of risks to allow from 1 to 3 weeks of this form of disability following the period of total.

EFFECTS: A scar resulting from a lacerated wound and its prominence, depends on the depth of the laceration, its position and the method of treatment. These scars are red at first and in time fade to a whiteness which remains, and later contraction may follow, causing them to become more noticeable.

PUNCTURED WOUNDS OF THE FACE

INFORMATION: Punctured wounds of the face may result from any sharp or blunt instrument which enters the skin to a greater or less extent. If the puncture goes into the nasal cavity or mouth or one of the bony cavities of the face, it becomes a penetrating wound. If it enters the mouth or nose, treatment is not difficult, but if it reaches one of the bony cavities, infection usually occurs and the suppuration which follows causes a prolongation of the disability and difficulty in treatment. Wounds of the face produced by missiles from fire-arms are almost without

exception penetrating in character, and if the fire-arm is exploded close to the face, a powder burn complicates the primary wound.

SIGNS AND SYMPTOMS of this class of wounds involving the face are plainly evident, and are followed by pain, hemorrhage, swelling and discoloration, and when the puncture or penetrating wound has been made by fire-arms, gun powder may be embedded in the tissue surrounding the opening. Shock is usually complained of and the degree of severity depends on the character of the wound.

Fig. 4.—Penetrating wound of face with powder marks. (Draper).

COMPLICATIONS: *Punctured Wounds* which are of any depth usually become infected, thus prolonging disability and causing the resulting scar to be more prominent.

Tetanus frequently follows gunshot injuries and especially if the wound has been inflicted by a blank cartridge. Disability is always prolonged in such cases and often termintes in death.

Erysipelas may develop in the wound, when the disability will

be prolonged according to the length of time required by this disease for recovery.

TOTAL DISABILITY: If the puncture does not enter the cavities of the face or head, this disability usually lasts from 3 to 10 days in preferred risks. Ordinary risks may require from 2 to 5 days immediately following infliction of the wound. If the puncture becomes a penetrating wound and the instrument enters one of the cavities of the face, total disability in preferred risks may last from 1 to 4 or 6 weeks, depending on the depth of the wound, the amount of laceration of the superficial and deep tissues and the severity of the inflammation which follows. Ordinary risks who are not brought in contact with people, generally require from 1 to 2 or 3 weeks of this disability. Should erysipelas or tetanus develop, total disability is prolonged according to the time required for recovery by the complication.

PARTIAL DISABILITY does not follow simple punctured or penetrating wounds of the face, unless total disability has lasted a long time and the physical condition of the individual is debilitated, when it may be necessary to pay from 1 to 2 or 3 weeks of this disability to persons who are insured under a preferred classification.

EFFECTS: A scar results in all cases from punctured or penetrating wounds of the face, and its prominence depends on its cause, position, depth and the resulting infection. Individuals are insurable for all kinds of policies from three to six months after complete recovery of these wounds, if the injury has not involved the eyes or brain. If one eye has been lost, an accident policy eliminating indemnity for the loss of one or both eyes can be issued if the occupation is not too hazardous. Life insurance can also be granted in the majority of cases. When the brain has been injured, insurance of all kinds must be denied the individual until at least from one to two years have elapsed and then each case must be considered separately.

BURNS AND SCALDS OF THE FACE

INFORMATION: Burns and scalds of the face occur frequently and especially the latter. They may be caused by exposure to steam, flames or contact with boiling liquids, overheated metals, caustic alkalies and acids. These injuries, when at all severe, leave permanent marks, and when the deeper tissues

of the face have been destroyed, the scars contract and produce much disfigurement.

SIGNS AND SYMPTOMS from burns or scalds depend on the degree of severity. If only the superficial tissues have been involved, there is pain, swelling, inflammation and later a slough. If the burn has been extensive and the deep tissues are involved, there is shock in addition to the above. When the face has been scalded by hot steam or boiling liquids, a blister only may result or the scald may be so severe that part of the tissues of the face are literally cooked and destroyed. If the latter case, there is

Fig. 5.—Marked contraction following deep burn of face and neck. (Fowler).

severe shock, swelling, inflammation, loss of tissue by suppuration and sloughing.

DIFFERENTIAL DIAGNOSIS: *Pemphigus* may sometimes be claimed as the result of an accidental scald, for the reason that the blisters which are characteristic of pemphigus vulgaris resemble those produced by an accident, but in this disease there is generally no circumscribed area of inflammation surrounding the bleb, and in addition there is constant pain and itching which may be slight or troublesome. When blebs of this disease rupture, a scab forms over the site of the blister and this does not

follow a blister produced accidentally, except when healing is almost complete.

COMPLICATIONS involving the eyes, ears, nose, mouth, throat or lungs may follow when burns and scalds are of such severity that these parts are involved. Disability is thus prolonged according to the organ affected.

Infection, Erysipelas or Tetanus may develop in these wounds and cause lengthening of the period of disability.

TOTAL DISABILITY should not result from superficial burns or scalds of the face, but individuals who are insured under preferred policies remain away from their occupations from 3 to 7 days on account of the appearance of the face. When the injury has been moderately severe, the face blistered and the skin partially destroyed over a small area, all classes of risks require from 1 to 2 weeks of total disability. When the injury has been severe, involving a greater part of the face, total disability lasts from 4 to 6 weeks and even longer in some cases. Complications such as erysipelas or tetanus prolong the above mentioned period of disability according to the time required for recovery of the complication. If an operation for skin grafting is necessary, total disability is prolonged from 2 to 3 weeks each time the operation is performed.

PARTIAL DISABILITY is not often paid following this class of injuries unless the burn or scald has been very severe, and on this account the physical condition has become greatly debilitated when from 1 to 3 weeks of this disability may be demanded.

EFFECTS: Superficial burns or scalds to the face do not leave any permanent mark. When the injury has destroyed the deeper layers of the skin or any of the muscular tissue, a permanent scar results, and if a great amount of tissue has been lost, contraction follows and much disfigurement is the result, this is especially true when the burn or scald involves the lips. If the burn or scald is deep and affects that part of the face of the male which is covered with hair, this ceases to grow.

PART III

INJURIES TO THE EYELIDS

ABRASIONS AND CONTUSIONS

INFORMATION: Abrasions and contusions of the eyelids, either the upper or lower, usually follow from blows which involve the surrounding parts and are generally produced accidentally; seldom by intent. In the latter case, indemnity is not payable under an accident policy when disability follows a blow which involves the eyes and which has been received in an altercation with another person, unless the blow was received when the individual had been attacked by highwaymen.

SIGNS AND SYMPTOMS: Immediately following the injury, there is swelling with pain in the eyeball and later discoloration of the lids and surrounding parts. If the injury has been an abrasion, there is a slight bleeding which gradually ceases and scabs form over the abraded parts. There is usually a watery discharge from the eyes following a blow to this part of the body, and this persists for several days.

COMPLICATIONS: *Ptosis* or drooping of the upper lid is occasionally due to blows which result in paralysis of the third nerve supplying the levator palpebræ muscle. If due to a blow evidence of the injury is apparent one to two weeks after the accident. Cases of any standing show wrinkling of the forehead, due to constant attempts of trying to elevate the lid by the occipito-frontalis muscle.

TOTAL DISABILITY is payable as the result of these accidents, and in preferred risks requires from 7 to 10 days. Ordinary risks who are not required to use the eyes generally ask from 3 to 7 days of this disability. Preferred risks would not be totally disabled more than from 1 to 3 days if pride did not keep the individual away from work. This condition can be obviated by painting the discolored parts with water colors.

PARTIAL DISABILITY of from 1 to 2 weeks may be demanded by preferred risks when the occupation requires constant use of the eyes and the injury has been severe. No partial disability should be paid to ordinary risks.

EFFECTS: None.

INCISIONS AND LACERATIONS OF THE EYELIDS

INFORMATION: These wounds are usually caused by sharp or blunt instruments which divide the tissues cleanly or in a ragged manner and frequently injure the underlying eyeball. Individuals who wear glasses are sometimes struck over the eye by missiles, breaking the glasses and causing incised or lacerated wounds of the eyelids and surrounding tissue and in many instances injury to the eye complicates the wound of the lids.

SIGNS AND SYMPTOMS follow immediately, and depend on the character of the wound. A clean cut incision running longitudinally shows slight bleeding, but no gapping of the wound edges unless the lids are closed. When the cut runs in a perpendicular manner, the two extremities of the lid are pulled apart and exposure of the eyeball results if the incision has completely cut through the lid. Lacerations produce bleeding and uneven cuts which may extend through the lid and cause exposure of the eye; swelling and ecchymosis follow in both cases and a watery discharge which lasts from twelve to forty-eight hours.

COMPLICATIONS: A number of complications may ensue from a deep incision or laceration of the eyeballs, and these are described under Conjunctivitis.

TOTAL DISABILITY follows these injuries in all classes of risks and lasts from 1 to 3 weeks, depending on the extent of the incision or laceration. If a complication ensues, disability may be prolonged from 1 to 3 weeks.

PARTIAL DISABILITY of from 1 to 4 weeks may be necessary in preferred risks when the occupation requires much use of the eyes.

EFFECTS: A scar results and the degree of deformity depends on the location of the injury, its severity and also the success of the attending surgeon in repairing it. These scars are permanent and on account of the contracting which may ensue, deformity may become more marked. Unless the eyeball has been injured, individuals are insurable for any kind of a policy as soon as recovery is complete.

PUNCTURED WOUNDS OF THE EYELIDS

INFORMATION: Punctured wounds to this part of the body almost always become perforating wounds and cause injury

to the eyeball. They are produced by sharp-pointed instruments or by missiles propelled by gunpowder and are usually infected, causing inflammation of the eyeball to result.

SIGNS AND SYMPTOMS: Evidence of a puncture is apparent, showing a break in continuity of the lid, with pain, bleeding, swelling and photophobia, accompanied by a watery discharge at first, which later becomes purulent in character. If the puncture is the result of an injury by a fire-arm, the eye is usually de-

Fig. 6.—Punctured wound of left eye without powder marks. (Draper).

stroyed and there is a discharge of the contents of the orbital cavity, producing entire loss of sight in the injured eye.

COMPLICATIONS follow injuries of this character and are described under Conjunctivitis.

TOTAL DISABILITY: When the puncture has not penetrated the lid and involved the eyeball or when it does penetrate but does not injure the underlying organ, total disability in all classes of risks lasts from 5 to 10 days. If the punctured wound injures the ball of the eye, total disability is prolonged and persists for the time that the complication requires for recovery. Injuries which destroy the eyeball, thus necessitating a surgical operation for the removal of the same, requires from 3 to 6 weeks for

a complete recovery, but as accident policies generally pay a specific sum for the loss of an eye, this time is not important.

PARTIAL DISABILITY of from 1 to 2 or 3 weeks may follow in preferred risks when a punctured wound of the eyelid penetrates and injures the eyeball. If total disability lasts for a considerable time, partial disability may be increased, depending on the cause of the primary total disability.

EFFECTS: If the puncture is only a small one and does not penetrate the lid, the resulting scar is invisible. Should the puncture penetrate the lid and destroy any part of it, there may be a resulting scar which is sufficient to cause a slight deformity. When the eyeball is destroyed as the result of a puncture, deformity is permanent and its degree depends on the amount of destruction of tissue at the time it was inflicted and also on the success of the operation for the removal of the ball. Individuals who have suffered the loss of one eye are impaired risks for accident insurance, although some companies will issue an accident policy to persons who are only supplied with the use of one eye,—when the loss of the other eye has been suffered some years previously. When there is only one good eye, a life or health policy will usually be issued to persons without any restriction.

BURNS AND SCALDS OF THE EYELIDS

INFORMATION: These injuries may be produced by boiling liquids, steam, acids, caustic alkalies, etc., which come in contact with the open or closed lids. If the injury does not involve the eyeball and only affects the lids, disability is short. If the injury results in a destruction of the tissue of the eyelids or the eyeball itself, disability is long and deformity is permanent. When the eyelids are burnt or scalded there is usually an injury of the same character to the surrounding tissue.

SIGNS AND SYMPTOMS depend on the cause of the burn or scald. Steam and boiling liquids produce blisters with inflammation, swelling, pain and a watery discharge. Strong acids burn and destroy the tissues with which they come in contact, producing swelling, redness, pain and tenderness. Hot metals when brought in contact with the eyelids, either produce a blister with swelling, redness and pain, or the parts are carbonized at the point of contact between the lid and the heated metal, with a surrounding area of inflammation, pain and tenderness; in addition photo-

phobia follows all burns and scalds involving the lids. If the burn or scald injures the eyeball, complications involving this part ensue, signs and symptoms of which are described under Conjunctivitis and Ulcers of the Cornea and Sclerotic Coat.

DIFFERENTIAL DIAGNOSIS: *Blepharitis Marginalis* (Tinea Tarsi) is a chronic pustular inflammation of the edges of the eyelids which may be found in adults and which may be claimed as due to a burn or scald. This disease is always bilateral, occurs in individuals whose occupation exposes them to dust and irritating vapors and results in thickening of the edges of the lids with loss of the lashes. It should not be mistaken for an accident.

Herpes in this situation may sometimes be said to be caused

Fig. 7.—Blepharitis marginalis. (Haab).

by a scald, but a history of having suffered from the same disease at a previous time would serve to eliminate this affection when claimed as the result of an accident.

COMPLICATIONS follow severe burns and scalds of the eyelids when the eyeball is involved, and these are described under disease and injuries of the Cornea and Sclerotic Coat.

TOTAL DISABILITY in all classes of risks lasts from 1 to 3 weeks when the burn or scald has not involved the eyes and is only moderately severe. When severe, this disability lasts from 4 to 8 weeks, and may still be prolonged the same length of time if an operation is required for replacing a part of the lid which may have been destroyed by the accident.

PARTIAL DISABILITY follows total in any class of risks

when the occupation requires much use of the eyes and lasts from 1 to 3 weeks. Individuals insured under a lower classification seldom deserve any partial disability.

EFFECTS: When the burn or scald has been slight and superficial tissue only is destroyed, the resulting scar is imperceptible. If sufficient tissue is lost to cause an operation for its replacement, the scar is permanent and deformity is more or less prominent, depending on the situation of the injury, its extent and the success of the surgical operation for its repair. Individuals who have suffered from burns or scald of the eyelids which have not involved the eyes, are unimpaired for all kinds of insurance.

PART IV

CORNEA AND SCLERA

ULCERS OF THE CORNEA AND SCLEROTIC COAT

INFORMATION: Ulcers involving the cornea and sclerotic coat are frequently seen, are more common in the aged, and are due to a number of causes. Small foreign bodies which are blown into the eyes and remain there for some time may cause simple ulcers to form. Ulcers are also the result of a great many other causes, and when an individual claims disability from an ulcer due to an injury, it is necessary that close attention be given to the claim and positive history of an accident be secured.

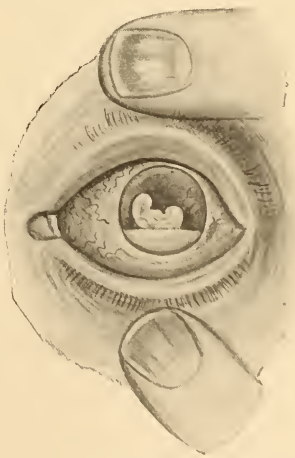


Fig. 8.—Infected ulcer of the cornea, with hypopyon—hypopyon-keratitis. (De Schweinitz).

SIGNS AND SYMPTOMS: When an ulcer of the cornea or sclerotic coat results from the irritation caused by a foreign body, there is a distinct and well remembered history of some particle getting into the eye and causing pain and lachrymation which has persisted for several days or more, and has finally caused a physician

to be called on when the foreign body is removed. At this time there is a circumscribed congestion of the eye with a slight contraction of the pupil. The base of the ulcer has a grayish floor and presents a slight scooped-out appearance. Slight or severe pain is present with lachrymation, blepharospasm and photophobia. Ulcers due to disease do not have this history. If an individual carries a general health policy, the cause of the ulcer is unimportant.

DIFFERENTIAL DIAGNOSIS: *Simple or Non-Suppurating Ulcers* may be due to conjunctivitis, exhausting fevers, impaired nutrition or to a disease or injury involving the ophthalmic branch of the fifth nerve. These ulcers so closely resemble those caused by injury that a differential diagnosis is only made from a previous history and condition of the claimant.

Herpetic Ulcers sometimes result when Herpes Zoster of the ophthalmic division of the fifth nerve exists, and these begin by a number of small vesicles forming on the cornea, then coalescing, and an ulcer results. Severe neuralgic pain accompanies this form of ulceration and slight anesthesia of the cornea may be present.

Simple Keratitis, which has been existing for some time, may cause ulcers of the cornea. These ulcers have a tendency to spread, some are easily controlled, while others are almost incurable. They exist with or without suppuration.

Phlyctenular Keratitis is characterized by small ulcers which begin by a grayish elevation and usually accompany phlyctenular conjunctivitis. These points coalesce, and as a larger surface becomes affected, leashes of vessels form between the ulcers until the whole cornea may be covered by a network of blood vessels. These points of ulceration are extremely painful and cause photophobia of a marked degree. The discharge which comes from these ulcers irritates the surrounding parts and causes a burning pain. When this form is situated on the conjunctiva the duration is short, lasting from one to two weeks; when on the cornea they last much longer.

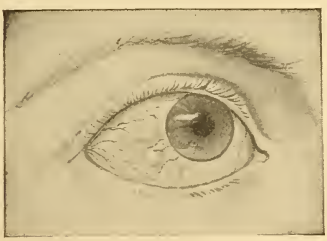


Fig. 9.—Phlyctenular conjunctivitis. (De Schweinitz).

Syphilitic Ulcers may be present on the conjunctiva, and, if

found, there is usually a history of this disease existing, and this serves to make the diagnosis clear.

COMPLICATIONS: The different forms of conjunctivitis may exist with or complicate an ulcer of the cornea or conjunctiva.

TOTAL DISABILITY following an ulcer which is caused by a foreign body in the eye, in all classes of risks generally lasts from 1 to 2 or 3 weeks, sometimes from 3 to 6 or 8 weeks may be necessary before the disability is ended, this depending on the depth of the ulcer, its situation and the physical condition of the individual, together with the treatment. Ulcers which are caused by disease usually require a longer time for healing than those resulting from an accident, and this time depends on the kind of an ulcer, the physical condition of the individual and the treatment.

PARTIAL DISABILITY may sometimes be necessary in preferred risks who have suffered from an ulcer due to an accident, and lasts from 1 to 3 or 4 weeks, depending on the amount of work required of the eyes, the length of previous total disability and the physical condition of the individual. This disability is not deserved in ordinary risks, unless the occupation requires constant use of the eyes, when the above time would usually be sufficient.

EFFECTS: Small ulcers of the cornea which leave little, if any opacity, cause no permanent defect of the sight; larger ulcers which are followed by so much opacity of the cornea that the sight is interfered with, produce impaired risks for accident insurance unless the opacity becomes absorbed—which it does to a certain degree in some cases. Ulcers not affecting the conjunctiva and resulting from accidents, cause no impairment for life, accident or health insurance.

CONJUNCTIVITIS

INFORMATION: Conjunctivitis or inflammation of the conjunctiva of the eye can be due to a number of causes. It may be accidental in origin when a foreign body gets into the eye and sets up an irritation, when the conjunctiva is burnt by acids, quicklime or any other agent that will produce these injuries, and also from cuts, lacerations and punctured wounds. Conjunctivitis in many cases is not due to an accident, but is caused by disease, and if so caused an accident insurance policy would not cover dis-

ability arising from this condition, but a health or general disability policy would pay indemnity for the length of time the individual was prevented from resuming the occupation.

SIGNS AND SYMPTOMS depend on the cause of the inflammation. When the conjunctivitis is due to an injury, there is a history of such with evidence of the accident. The conjunctiva may be cut, torn or burnt, and these signs are apparent when the proper kind of light is used for their detection; in addition there is tumefaction of the membrane which is red and injected and accompanied by a watery discharge. If the surface of the conjunctiva has been ruptured, bleeding occurs. When the inflammation is the result of a disease there is no specific spot which marks the beginning of the inflammation as would occur following an injury, the other signs and symptoms are practically the same, photophobia being present in all cases of this inflammation. A number of cases of conjunctivitis are accompanied or complicated with ulcers. For the signs and symptoms of which see description of Ulcers of the Cornea and Sclerotic Coat.

DIFFERENTIAL DIAGNOSIS: *Catarrhal Conjunctivitis* or "pink eye" is an epidemic inflammation of the conjunctiva in which both eyes are generally affected, first one and then the other. In this inflammation the individual complains of a smarting sensation, itching, slight pain and mild photophobia with increased lachrymation. The conjunctiva of the ball and lids is edematous and red, while the papillæ are enlarged and prominent. These cases almost always have a history of the individual being in contact or knowing some one recovering from a similar condition, and occur more frequently in the spring and fall, lasting from seven to fourteen days.

Gonorrheal Conjunctivitis is an acute, severe and destructive inflammation of the conjunctiva which is caused by a specific germ, the gonococcus, which is present in the discharge from the eye. This disease is usually transferred by the fingers to the eyes and runs a very rapid course, developing within a few hours from the time infection occurs, and at first the signs and symptoms are those of a simple catarrhal conjunctivitis. They increase, however, with great rapidity, and within twenty-four hours a healthy eye becomes edematous, swollen and inflamed with a thick purulent discharge, followed in a short time by ulcers in one or more places. This disease is so rapid in its course that the eye may be destroyed within two to four days and such a condition never

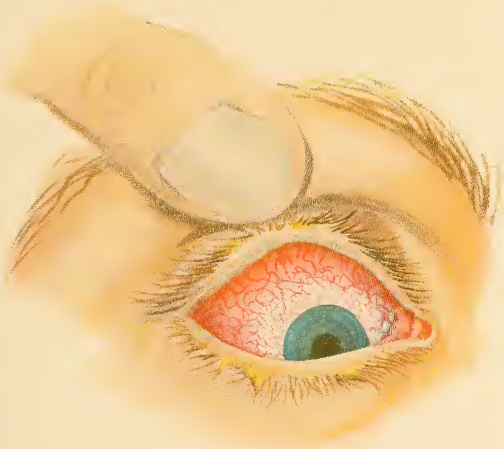


Fig. 1.—Acute Catarrhal Conjunctivitis.

Fig. 2.—Purulent Conjunctivitis.

Fig. 3.—Acute Trachomatous Conjunctivitis (Theobald).

results from an accident. Accident or disability policies do not always pay indemnity when the disability is caused by this disease—which is venereal in origin.

Granular or Follicular Conjunctivitis (*Trachoma*) is an acute, infectious inflammation of the conjunctiva, characterized by thickening and vascularity of the membrane under which is found translucent granular masses. This disease is usually found in emigrants or foreigners, is chronic in its course and would hardly be alleged as the cause of disability.

Phlyctenular Conjunctivitis is an inflammation which generally occurs in individuals who are debilitated by improper food, exposure, etc. It is recognized by the appearance of one or more grayish red elevations which are capped by small vesicles and which rupture and form ulcers. There may be severe pain, photophobia and lachrymation.

Diphtheritic Conjunctivitis is sometimes seen and is characterized by a croupous exudation which is adherent to the conjunctiva. It usually occurs during the course of diphtheria and can be easily diagnosed.

TOTAL DISABILITY from a simple conjunctivitis which has been caused by a small foreign body getting into the eye and not complicated with an ulcer, usually lasts about 1 week in all classes of risks. When the conjunctivitis is the result of a more severe injury to the cornea or conjunctiva, and this injury is followed by an ulcer, total disability in all classes of risks lasts from 2 to 4 or 6 weeks. If the inflammation is a catarrhal conjunctivitis occurring in one eye and then after three or four days transferring itself to the other eye, total disability usually lasts from 10 to 14 days. If the inflammation is confined to one eye only, 1 week of this disability is generally sufficient. Gonorrheal conjunctivitis produces total disability for an uncertain period, depending on the virulence of the infection and resulting damage to the eye; it may cause disability of from 1 to 2 or 3 months, almost always terminating in the loss of sight in the affected eye. Phlyctenular conjunctivitis causes total disability, according to the situation of the vesicles. If on the conjunctiva, this disability is short and lasts from 1 to 2 weeks; if on the cornea, it may require from 2 to 3 weeks. On account of this disease being more or less chronic, great care must be exercised in ascertaining if it existed before the policy was taken out.

PARTIAL DISABILITY is not often demanded in conjunc-

tivitis unless the inflammation has been of long duration and the individual is one whose occupation requires frequent use of the eyes, when from 2 to 4 or 6 weeks may be demanded. This disability is not deserved by ordinary risks unless the occupation exacts considerable use of the eyes.

EFFECTS: Simple conjunctivitis as the result of a foreign body in the eye does not impair the risk for any form of policy. When the conjunctivitis is severe and results in an ulcer, and this ulcer is situated on the cornea, there may be a resulting opacity that will interfere with the sight; in which event each particular case must be considered by itself. An attack of conjunctivitis which is followed by an ulcer, even though severe and more or less of the sight has been impaired, does not prevent an individual from securing a life or health policy.

PART V

EARS

INJURIES OF THE AURICLE

INFORMATION: The auricle or that part of the ear which projects from the head may be injured in a number of ways. These injuries, when produced accidentally, seldom cause total disability unless the individual is following an occupation which requires constant use of an apparatus to his ear. Telephone operators, stock brokers who answer the 'phones in such offices, and others, may be totally disabled from an injury to this part of the body. This part of the ear may also be frozen, when both ears are usually in the same condition and total disability would result and persist for a longer time for those whose occupation requires constant use of the ears than where the duties do not frequently require them to be pressed against instruments.

SIGNS AND SYMPTOMS: When the auricle is injured by an abrasion, contusion, incision, laceration, punctured wound, burn or scald, the signs and symptoms are such as would follow these injuries to any other part of the body, and are plainly evident. When the accident causes a rupture of the membrana tympani there is bleeding from this part, and danger of an infec-

tion involving the middle ear is present. If the ears are frost-bitten they become red and swollen, painful, rigid and without sensation. When the circulation is re-established in a frozen ear, there is burning and itching which persists for some days, and is followed by peeling of the skin of the ears.

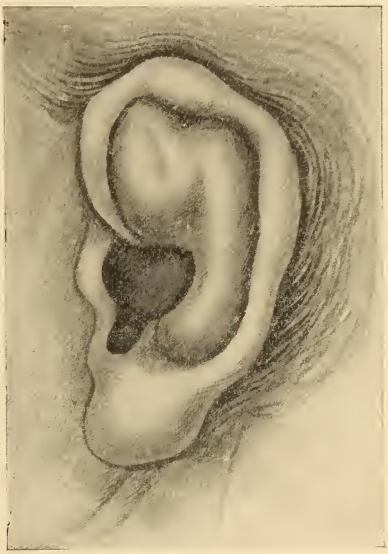


Fig. 10.—Perichondritis of auricle following freezing. (Keen).

COMPLICATIONS: *Hematoma Auris* is not uncommon in the insane, and is usually due to a blow over the ear, although it may occur spontaneously. It is a blood tumor situated between the cartilage and perichondrium on the anterior surface of the auricle. If this swelling is due to an accident, other evidence of the injury is usually apparent and a history of the accident is easily obtained, together with reports of witnesses.

TOTAL DISABILITY in preferred risks whose occupation requires the use of an instrument of any sort in contact with the ear, depends on the degree of injury, and an ordinary abrasion or small incision will usually cause total disability to last from 1 to 3 days. If the auricle is badly lacerated, punctured or severely burned, individuals as above described require from 1 to 2 weeks of total disability. Ordinary risks are entitled to 2 to 7 days of total disability only, when a severe injury involves these parts. Frost-bitten ears seldom produce enough discomfort to cause disability, but individuals will sometimes refuse to resume their occupation while the ears are swollen or bandaged, when 1 week of total disability may be allowed if a general health or disability policy is carried and other conditions are complied with.

PARTIAL DISABILITY is sometimes demanded by risks of all classes when a more or less severe injury of the ear has occurred. It is questionable if this disability should be allowed in any case, and if permitted 1 week would appear ample.

EFFECTS: After recovery from an accident to the auricle, a

more or less noticeable scar results or this part of the ear may be deformed, depending on the character and extent of the injury. Individuals who have suffered from such an injury and recovery has been complete, are insurable for any kind of a policy.

ABSCESS OF THE MIDDLE EAR

INFORMATION: Whenever the middle ear becomes infected, it is generally by way of the eustachian tube and an acute

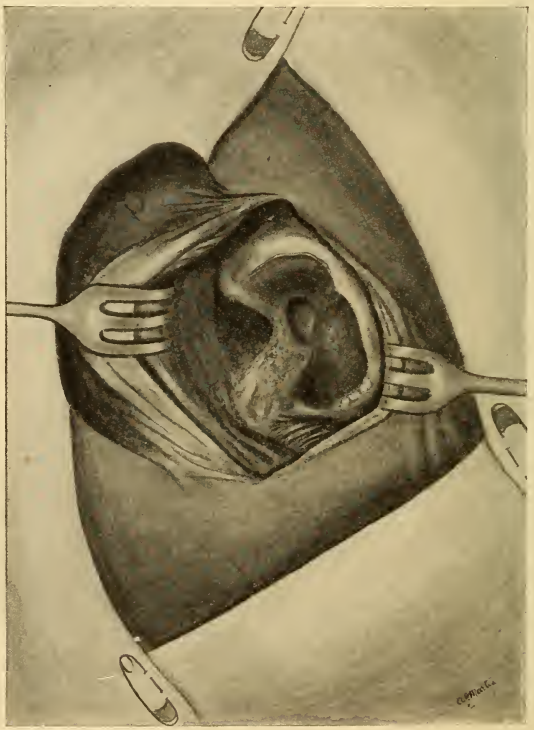


Fig. 11.—OPERATION FOR ACUTE MASTOIDITIS FOLLOWING INFECTION FROM MIDDLE EAR. (Keen). The entire pneumatic structure of the mastoid has been broken down. The tip of the mastoid has been removed, exposing the posterior belly of the digastric muscle. The sigmoid groove lodging the lateral sinus is well shown. The zygomatic cells have also been obliterated and a portion of the posterior wall of the bony meatus has been taken away. The deepest portion of the bony cavity leads directly to the aditus ad antrum. (Author's dissection.)

abscess results. If the membrana tympani is perforated accidentally, the infection can enter from that point and the resulting

disability is covered by an accident policy. Abscess of the ear not due to an accidental injury, but resulting in disability is covered by a general health or disability policy and indemnity is payable under such conditions. Sometimes these policies only pay indemnity during house confinement, but as an abscess in this situation usually demands confinement for a certain time and the individual receives indemnity according to the terms of the policy. Individuals suffering from an abscess of the middle ear are in danger of having this inflammation extend and involve the brain, when the resulting condition assumes a grave aspect.

SIGNS AND SYMPTOMS: An acute abscess of the middle ear is often said to be due to colds, but as the mucous membrane of the naso-pharynx is congested and infected with germs, these gain entrance to the eustachian tube and travel to the middle ear and cause an abscess, when there is pain of a throbbing nature, increased temperature, inability to sleep or lie on the affected side, and if left alone the abscess evacuates itself through the drum of the ear when immediate relief is obtained.

TOTAL DISABILITY usually lasts from 1 to 2 weeks in all classes of risks, depending on the time when the abscess is opened; if opened early this disability is shorter. In cases with a severe inflammation, total disability may last as long as 3 weeks; this being due to the debilitated condition of the individual from loss of sleep and appetite during the acute stages of the abscess.

PARTIAL DISABILITY is not deserved in any class of risks following an abscess of the middle ear.

EFFECTS: Individuals who have suffered for the first time from an abscess in this situation are insurable for any kind of a policy from three to six months after complete recovery, and by that is meant the discharge has ceased and the membrane has become entirely healed. Persons suffering from an abscess of this kind are not insurable for a life or health policy as long as the discharge persists, and if it is present for a number of months or years, they are not considered insurable for either of these policies until from three to five years have elapsed after the cessation of the discharge. Insurance companies will not accept an individual for any kind of a policy, if it is known that a discharge is existing from either one of the ears.

PART VI

INJURIES INVOLVING THE SKULL

FRACTURES

INFORMATION: Fractures of the skull are usually considered under two heads, fractures of the vault and fractures of the base. Injury to the bones in this situation is caused by falls and the head striking a hard substance, the result of blows received in personal encounters or from a falling body, and also from a fall in which the body alights on the feet or base of the spine. Fractures of the vault are generally produced by direct force, while those of the base of the skull result either from a continuation of

Fig. 12.—Fracture of occipital bone extending into the posterior fossa. (Eisendrath).

the fracture as the result of direct force, or by transmitted force such as would occur through the spine. Disability which results from a fracture of any of the bones of the skull is due to tearing and laceration of the brain and its membranes, as an injury which

will fracture the skull produces serious injury to its contents. Fractures of the base of the skull are more often fatal, for the reason that they are usually compound, thus permitting an infection of the brain. These fractures are not common in early youth, being most frequently seen in adult life.

SIGNS AND SYMPTOMS: Loss of consciousness follows a blow which causes a fracture of the skull, and this may last from a few minutes or hours to several days, finally ending in com-

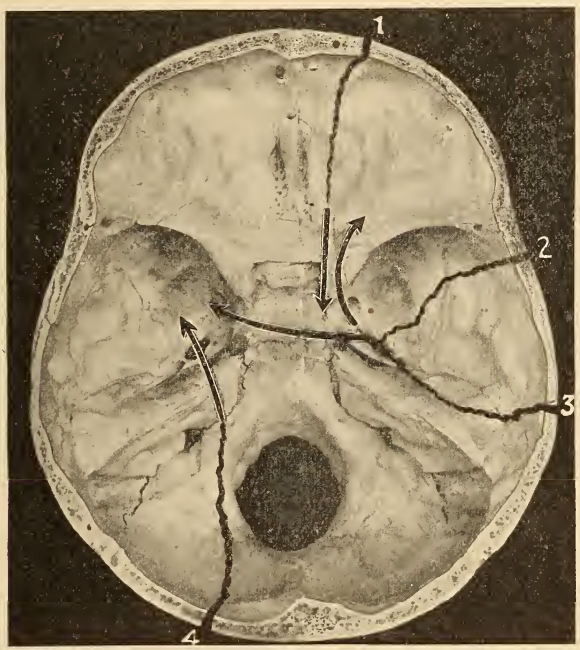


FIG. 13.—MOST FREQUENT LINES OF FRACTURE OF BASE OF SKULL. (Eisendrath).

The black arrows indicate their direction if they traverse further than indicated in the illustration: 1, Fracture of anterior fossa; 2, 3, fractures of middle fossa; 4, fracture of posterior fossa.

plete return to consciousness or a semi-comatose condition which may persist for some time before consciousness is well established, headache, inequality of the pupils of the eyes and cerebral vomiting. When the fracture involves the base of the skull, there is hemorrhage from the nose and ears and a discharge of cerebrospinal fluid in a considerable quantity. Shock is one of the prominent symptoms of a fracture of the skull and its degree of severity depends on the injury which has been sustained by the brain.

Evidence of a fracture exists and is ascertained by bimanual palpation which may disclose a depression in the skull. A cracked-pot sound is detected under percussion which may sometimes be apparent to the individual himself and not to the examining surgeon.

COMPLICATIONS: *Infection* is the most dangerous and frequent complication following a compound fracture of the skull. As fractures at the base of the skull are always compound, this danger is added in addition to the more serious nature of the primary injury. If an infection occurs, meningitis develops and death usually ends the case.

TOTAL DISABILITY in fractures of the skull depends on the severity of the fracture, its location and duration of the period of unconsciousness. Preferred risks who suffer from a simple fracture of the vault of the skull and the period of unconsciousness is short, are totally disabled from 3 to 6 weeks. If the fracture of the vault has been more extensive or a fracture of the base occurs and unconsciousness persists from one to three or four days, total disability usually lasts from 6 to 8 or 12 weeks. In cases of a fracture involving either the vault or base of the skull when unconsciousness persists from one to two or three weeks, total disability generally lasts from 3 to 6 months. Ordinary risks suffering from a simple fracture of the skull are not totally disabled as long as preferred risks, this disability lasting from 2 to 4 weeks. In the more serious injuries to the skull occurring in ordinary risks, total disability is about the same as that required by preferred risks. When the fracture has been compound and infection of the brain follows, death frequently ends the case within 1 week after meningitis has developed. If an operation is necessary, total disability is not often prolonged thereby.

PARTIAL DISABILITY is demanded by preferred risks following a fracture of the skull and in a simple fracture with a short period of unconsciousness from 3 to 6 weeks are usually necessary. When the fracture has been extensive or compound and a considerable period of unconsciousness has followed the injury, partial disability may be asked, and from 6 to 12 weeks are not excessive in these cases. Individuals who are insured under the ordinary classification and whose duties do not require brain work, are not entitled to any partial disability.

EFFECTS: Following a fracture of the skull, the effects depend on the injury to the brain which has occurred at the time

of the accident. Individuals suffering from simple fractures which go on to recovery without complications and in which the disability lasts from four to eight weeks, are insurable for any kind of a policy six months after complete recovery. When the accident has been more severe and a long period of unconsciousness ensued, either with or without an operation, such individuals are not insurable for any kind of a policy until from three to five years have elapsed after the date of the accident. Fractures of the skull which cause a serious injury to the brain may result in impairment of brain activity in the individual, and this may persist for some months or years before recovery is complete.

PUNCTURED WOUNDS OF THE SKULL

INFORMATION: Wounds of the skull which enter the cranial cavity may be either penetrating wounds or those which

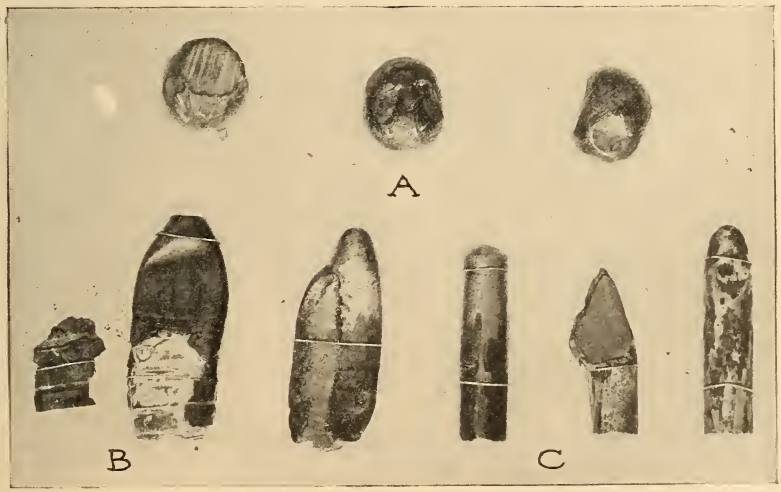


Fig. 14.—Deformed bullets removed from different parts of the body. A. Shrapnel; B, brass-jacketed Remington; C, Mauser bullets. (Keen's Surgery).

enter the cavity only; or perforating wounds when the instrument or missile which goes into the cavity, not only enters, but also leaves it. These wounds are made by violence and result from any pointed instrument entering the brain cavity by force or any missile propelled by gunpowder. Penetrating or perforating wounds of the skull are always accompanied by a fracture in one

or more places. When the puncture results from a missile propelled by gunpowder, the outer table of the skull is penetrated and the inner table is usually splintered, and some of these small particles of bone are driven into the brain. If the wound is a perforating one, these conditions apply to its point of entrance and are reversed at its point of exit. Foreign bodies are generally carried into a punctured or penetrating wound and in this situation may be lodged inside the skull. Disability following this class of wounds results from the injury to the brain and not from the fractured bones. Injuries due to punctured wounds of the skull produce early death or long periods of disability; therefore, an early settlement by an insurance company while advantageous to them in a financial way, causes so much dissatisfaction and possibly a law suit at a later date, that such settlements are not often made until disability is ended.

SIGNS AND SYMPTOMS depend on the severity of the injury and its cause; shock of a more or less degree is always present when the brain suffers an injury of any kind. If the wound is a penetrating one and is made by a knife, dagger, etc., there is seen the point of entrance, with bleeding and sometimes a part of the instrument has been broken off and is found imbedded in the skull. When the wound is caused by a gunshot missile, there is a small point of entrance through the scalp, evidence of a fractured skull, bleeding with a discharge of brain substance, unconsciousness, cerebral vomiting, rapid, weak, irregular pulse and generally an early death. After an injury of this character to the brain, infection frequently follows or an abscess develops, but this latter does not occur until at least from two to six weeks after the accident.

COMPLICATIONS always follow a punctured or perforating wound of the skull.

Infection of the wound edges or of the brain itself is the most usual complication after the infliction of a penetrating wound of the skull. When the wound injures the brain, an inflammation of the brain itself or its covering only may be the result.

Tetanus not uncommonly follows a wound of this kind when inflicted by fire-arms, and is more often seen when the wound has been produced by the explosion of a blank cartridge held in close proximity to the head; in addition to infection by the bacillus of tetanus, a septic infection also exists.

Erysipelas is liable to develop in the scalp when a punctured wound of the skull exists. Disability, however, is rarely length-

ened by this complication unless the puncture of the skull has been very small and minute and has not penetrated the skull, when the length of time necessary for recovery of the injury would not be as long as that required for recovery following an erysipelatous inflammation of the scalp.

TOTAL DISABILITY following punctured wounds of the skull which do not involve the brain, require from 1 to 3 weeks in all classes of risks. If the wound punctures the skull and slightly damages the brain itself and is not followed by infection or death, total disability usually lasts from 2 to 3 or 6 weeks. When the wound becomes a perforating one, death generally results at once or within a few days from the time of infliction. Punctured or perforating wounds of the skull which severely damage the brain almost invariably cause death, but in rare instances individuals recover after such injuries. In these cases, however, total disability is long and uncertain, often lasting from 2 to 4 months and sometimes longer.

PARTIAL DISABILITY follows wounds of the skull which injure the brain, and in preferred risks lasts from 3 to 12 weeks according to the character of the injury and the exact duties of the occupation of the individual. Ordinary risks are not often entitled to partial disability following this class of injuries, unless the occupation requires more or less brain work. This form of disability may be necessary and may run the limit of the policy in cases following a punctured or penetrating wound of the skull which severely injures the brain and causes total disability to last two to three months or more.

EFFECTS: Penetrating wounds of the skull which cause short periods of total disability usually leave no impairment, and the individual is insurable for accident, health or life insurance from three to six months after complete recovery. When the wound has injured the brain or has penetrated it, insurance companies would hardly issue any form of policy to an individual at any time following the injury, unless a number of years have elapsed and it is shown that no bad results would likely occur, but even in such cases it would be hard to convince a medical director that the applicant would be an insurable risk for any kind of a policy.

PART VII

INJURIES AND DISEASES OF THE BRAIN

ABSCESS OF THE BRAIN

SYNONYMS: Cerebral abscess; acute encephalitis; suppurative encephalitis.

INFORMATION: Abscess of the brain may be due to a number of causes, the most frequent of which is suppurative otitis media, nearly fifty per cent. of the cases resulting from this disease. The next in frequency is injury, and this is mostly caused by a compound fracture of the skull, although a concussion may result in an abscess. General septic diseases, such as cancer, tuberculous masses which caseate and syphilis are some of the other causes. When an abscess is the result of an injury, it does not develop until at least two or more weeks after the accident and is generally situated at or near the site of injury. Abscesses vary in size, sometimes only containing a small quantity of pus, at other times the abscess may be large and occupy the whole

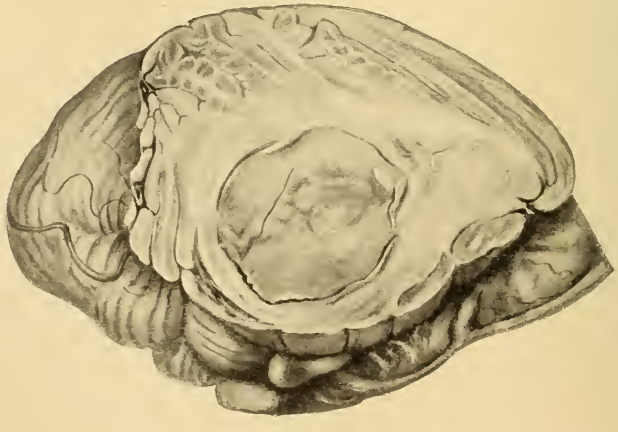


FIG. 15.—ABSCESS OF THE RIGHT CEREBELLAR HEMISPHERE. (Keen).
Resulting from a purulent clot in the posterior inferior cerebellar artery. The enlargement of the artery by the thrombus is shown in the illustration.

hemisphere. The right side of the brain is most frequently involved, and when large a fatal result is almost invariable.

SIGNS AND SYMPTOMS depend on the situation of the pus cavity. A brain abscess usually commences with a chill, cerebral vomiting, malaise and headache. The body temperature is normal or sub-normal, while the local temperature is increased, the pulse is very slow and anorexia is present. Headache may be general or localized, and as the abscess increases and causes pressure symptoms, there is Cheyne-Stokes respirations with an involuntary discharge of the contents of the bowels and bladder. Epileptiform convulsions sometimes occur, choked disk may be present, and if in both eyes it is more marked on the side corresponding to the location of the abscess. The pupil on the same side as the lesion is frequently dilated and immovable. The mental faculties are dulled and as pressure increases, a comatose condition gradually supervenes. Large abscesses cause pain and tenderness on the side of the skull analogous to the location of the abscess.

DIFFERENTIAL DIAGNOSIS: *Acute Meningitis* and abscess of the brain are sometimes hard to differentiate, although the first usually comes on suddenly and is marked with a chill, high fever, rapid pulse, flushed face, photophobia, vertigo, nausea, vomiting, delirium and marked rigidity of the cervical muscles.

Mastoid Disease may sometimes be mistaken for abscess of the brain, but this is generally associated with suppurative disease of the middle ear and is characterized by pain in the mastoid region, with tenderness and swelling. An abscess of the brain may result from mastoid disease and the two may exist at the same time

Thrombosis of the Lateral Sinus may occur and become infected. In these cases there will be swelling of the veins of the head and face, marked fluctuation of the temperature, rigors, general prostration and other signs and symptoms of pyemia.

A Tumor may be diagnosed as an abscess, but when it is remembered that this is of slow growth and the signs and symptoms produced by it are faintly marked at first and gradually become clearer, and also that tumors rarely occur in the temporo-sphenoidal lobe or in the cerebellum, it will be seen that there are some distinctive signs between the two, although they are few and the diagnosis is often exceedingly difficult.

TOTAL DISABILITY is uncertain in any severe injury to the head and it is especially so when an abscess of the brain exists. This disability may be short, lasting from 1 to 2 weeks only, or it may be long and require from 1 to 3 months before recovery takes place or death ensues. When the diagnosis of an abscess of the brain exists and there is a history of a severe injury, such as a fracture of the skull or a bad concussion, it is best for an insurance company to effect an advance settlement with an individual who may be carrying an accident policy by allowing 1 to 2 months of this disability. Should an adjustment not be secured, the abscess may terminate in death, and if this occurs within ninety days from the date of the accident the company may be liable for a death claim for the amount of the policy, and this would be much more than if the above time of total disability had been paid. Insurance companies do not care to take chances on these cases and prefer to make a settlement in advance. When the abscess is not the result of an accidental injury, the length of total disability would be unchanged, although in these cases an advance settlement would not be advantageous to the company, for the reason that death may terminate the case at any time, when apparently it would run indefinitely. Abscess of the brain can only be treated successfully by a surgical operation, which should be done at once, and when performed generally shortens the period of total disability.

EFFECTS: Individuals who have once suffered from an abscess of the brain and recovered, are not insurable for any kind of a policy until at least five years have passed without signs or symptoms of any kind, and even at this date it is questionable if an insurance company would accept such a person, for the reason that there may be some mental impairment which would not show on an application, but which would nevertheless exist and at some future time have an adverse bearing on the risk.

CONCUSSION OF THE BRAIN

INFORMATION: Concussion of the brain is the result of any blow to the head which produces a jarring, tearing or laceration of the fine vessels and nerves of the brain. It may also result from indirect force following a fall upon the buttocks or feet. A concussion may be so slight as to produce no perceptible signs and symptoms, excepting slight headache, or it may be so severe that unconsciousness results and persists for days or even weeks.

Concussion of the brain when sustained while the individual is intoxicated or under the influence of liquor—according to the wording of the policy—precludes obtaining indemnity for injuries occurring under these conditions.

SIGNS AND SYMPTOMS: If the blow has been slight, the individual may or may not fall, and this is followed by nausea, sometimes vomiting and a feeling of weakness which quickly disappears. If the injury has been severe, unconsciousness comes on at once, with relaxed and flaccid muscles, shallow respirations, depression of the heart with a feeble, irregular pulse and a subnormal temperature; no general paralysis exists, but control of the sphincter muscle of the bladder and rectum is lost, allowing the urine and feces to be passed involuntarily. As the individual reacts, cerebral vomiting usually occurs, consciousness gradually returns, the pulse becomes stronger and the temperature is slightly elevated. This reaction may not take place, when the comatose condition may exist for some days or even weeks; this depending on the severity of the blow to the skull. This unconscious condition may slowly disappear, to be followed by a condition of semi-consciousness which gradually ceases as the brain clears up. Cases in which unconsciousness has lasted from four to six weeks or longer have recovered after long periods of total disability.

DIFFERENTIAL DIAGNOSIS: *Alcoholic Coma* is often seen in an intoxicated individual and is sometimes complicated with coma resulting from a concussion, but an insurance examiner would rarely see a case under these circumstances.

Coma due to apoplexy may sometimes be seen and claimed as the result of a blow to the head. In cases of apoplexy, the pupils are uninfluenced by light, relaxation of the muscular system exists and voluntary movements are abolished on the paralyzed side. The eyes in many cases deviate toward the affected side of the brain and paralysis more or less extensive is always in evidence.

Uremic Coma is sometimes claimed as the result of an accident. In this condition there is albumin in the urine, a persistent sub-normal temperature, while edema of the legs and convulsions occur.

Coma from other causes may be claimed as due to an accident, but the differential diagnosis is easily made; these conditions not lasting any length of time. Coma as the result of the above described causes are practically the only ones which persist for

any length of time and which may be confounded with coma following an accidental injury.

COMPLICATIONS: *An Abscess* often follows a fracture of the skull or concussion of the brain and does not develop until at least two weeks after the injury has been sustained. It may, however, not show itself until weeks or months after an accident, and in some cases abscess of the brain has been said to develop a number of years after the injury was inflicted.

Insanity or incomplete return of the functions of the brain may result from a concussion. This condition is usually temporary, although it may become permanent and require confinement under restraint.

TOTAL DISABILITY following the above injuries is most uncertain. When the concussion has been slight and the period of unconsciousness following the injury has been short, preferred risks require from 1 to 2 weeks of this disability. If the period of unconsciousness lasts from one to three or five days, total disability in the same class of risks may persist from 4 to 6 or 8 weeks,—if no complications arise. Ordinary risks under the same conditions usually demand 1 week and 2 to 4 weeks respectively. Preferred risks who suffer from a concussion of the brain followed by unconsciousness lasting from one to two or three weeks are usually totally disabled from 2 to 4 or 6 months. Ordinary risks require from 1 to 3 months under the same condition.

PARTIAL DISABILITY follows total and is payable to preferred risks and those of the ordinary class whose duties require more or less mental work. This time may be from 3 to 12 weeks, depending on the severity of the primary injury, the resulting period of unconsciousness, the physical condition of the individual and the exact duties of the occupation.

EFFECTS: Insurance companies do not care to issue policies to those having suffered from a concussion of the brain in which unconsciousness has lasted from one to three days or longer, unless a period of from three to five years has elapsed after the accident and no evidence of the injury or any change in disposition has existed during that time. Individuals who have suffered from a severe concussion in which total disability has lasted from two to six months or more, would hardly be considered as insurable risks for any kind of a policy, until from five to eight years have elapsed after the accident.

CHAPTER VI

INJURIES AND DISLOCATIONS INVOLVING THE JOINTS AND BONES OF THE FACE

DISLOCATION OF THE TEMPORO-MAXILLARY ARTICULATION

INFORMATION: Unilateral or bilateral dislocations of the lower jaw occur, the latter being the more common. These dislocations are most frequently seen in women and are caused by over distension of the mouth, as in yawning. In the anterior form of dislocation, the condyle of the lower jaw is pushed forward and rests on the eminentia articularis of the temporal bone.

Fig. 16.—Bilateral anterior dislocation of the lower jaw with depressed chin, rigid lower jaw, open mouth, drawn cheeks. (Scudder).

Sometimes these luxations are produced accidentally, when a blow is received on the jaw while the mouth is partly open. Un-

less a dislocation of the jaw has a history and evidence of an external injury from a blow, it is almost always due to over-distention and is not properly accidental in origin, and the resulting disability, if any, should not be covered by an accident policy.

SIGNS AND SYMPTOMS depend on the kind of dislocation present. When bilateral, the mouth is open and fixed in this position. The condyles are in front of their usual position and posterior to them is a depression which can be readily demon-

Fig. 17.—Lateral view, same as Fig. 16 with rigidity of lower jaw muscles. (Scudder).

strated by pressure of the finger tips. Saliva flows from the mouth, swallowing and speech are difficult and severe pain may be present. If a dislocation is unilateral only, one condyle is out of position, the lower jaw is not so rigidly fixed in extension and there is some movement in the sound articulation.

TOTAL DISABILITY for dislocations of the lower jaw should not be allowed for more than from 1 to 2 or 3 days, for the reason that the dislocation is easily reduced and when the jaw is again in position disability is ended. There are exceptions, however, which require total disability of from 2 to 3 weeks and these occur in preferred risks when the occupation requires constant use of the mouth and vocal organs, such as singing, teaching, public speaking, etc.

PARTIAL DISABILITY is not payable in any case following an injury of this character.

EFFECTS: Dislocations of the jaw readily recur and in per-

sons with such a history an accident policy should contain a waiver which eliminates indemnity for disability due to this cause. With this waiver on an accident policy, individuals are insurable for life, accident or health insurance without regard to the history of previous dislocations.

FRACTURE OF THE NASAL BONES

INFORMATION: A fracture of one or both nasal bones is due to direct violence, the break usually involving the lower third of the bone and is the result of this part of the face coming in violent contact with a hard substance, as may occur in falls or when a blow is received from a clenched fist. In the latter case, an accident policy would not cover the ensuing disability unless the injury was the result of an unexpected attack by robbers, thugs, etc.

Fig. 18.—Fracture of nasal bones. (Scudder).

SIGNS AND SYMPTOMS are pain, dizziness, sometimes nausea, flattening of the nose which may be pushed to one side, hemorrhage from the nostrils and emphysema of the face and eyelids which may follow the forcing of air into the cellular tissue. Crepitus can sometimes be felt when the fractured ends of the bones are moved one upon the other. Hemorrhage is often profuse in these injuries and causes difficulty in breathing, but is soon checked and is not followed by a discharge of cerebrospinal fluid, as in cases of fractures at the base of the skull.

COMPLICATIONS: *Fractures* of the nasal bones may be compound, the fractured ends protruding externally or internally. When the ends of the bones lacerate the mucous membrane of the nose, a resulting infection can occur which may end in septic meningitis. If the blow has been a severe one, the cribriform plate of the ethmoid may be involved; in which case dangerous complications involving the brain often arise. Cerebral concussion may follow these fractures, and when present is due to the

violence of the blow producing the primary injury. If this complication ensues, the length of disability, etc., is found described under Concussion of the Brain.

Fig. 19.—Widening of nose following compound fracture of the nasal bones. (Keen).

TOTAL DISABILITY following these fractures depends on the individual and the occupation. Preferred risks such as clerks in department stores, office help, and those whose duties require contact with people are totally disabled from 1 to 2 weeks. Ordinary, or preferred risks whose duties are other than the above, usually require from 2 to 5 days only. If the fracture has been compound externally and much laceration of the skin exists, total disability in preferred risks is increased 7 to 10 days.

PARTIAL DISABILITY following a simple fracture of one or both nasal bones should not be allowed.

EFFECTS: When the bones are properly set and retained in place, there is no resulting deformity. The location of the fracture or other injuries may make the retention of these bones in proper position a difficult matter. In such cases more or less deformity results even after the most careful treatment. An indi-

vidual who is suffering from a fracture of these bones without any complication, is insurable for any kind of a policy from three to four months after the date of the accident. If a concussion of the brain occurs or any other complication is present, the insurability is determined by the complication and not by the injury.

FRACTURE OF THE MALAR BONES

INFORMATION: The malar bones are situated on each side of the face and form the centre of a convex surface, conse-

FIG. 20.—FRACTURE OF MALAR BONE. (Eisendrath).
A frequent seat of fracture of the malar bone along the lines shown, namely, at its junction with the superior maxilla and the zygomatic process of the temporal bone. The arrows show the direction in which the fragments composed of the entire malar bone are dislocated.

quently a fracture of these bones does not often occur unless it is the result of violent, direct force, when one of the processes of the bone is usually involved, and in addition concussion of the brain may follow from the force of the blow which produces a fracture. Other bones of the face are frequently injured when the malar bone is accidentally fractured.

SIGNS AND SYMPTOMS are pain when masticating food, swelling of the face, depression over the fractured bone or process, with discoloration, and sometimes crepitation can be elicited by pressure of this bone against its surrounding articulations. When a fracture of the orbital process of the bone occurs, a subconjunctival hemorrhage may result.

COMPLICATIONS: *Concussion of the Brain* may be present as the result of a blow which fractures this bone, but unless the concussion is severe, disability is not prolonged by this complication.

Fracture of the Superior Maxillary usually exists in conjunction with fractures of the malar bone. When they occur, total disability is not often prolonged beyond the period required for fractures in the malar bone to become united, unless a compound fracture of the superior maxillary exists, when disability is prolonged beyond the usual time.

TOTAL DISABILITY: Preferred risks who suffer from an uncomplicated fracture of this bone usually require from 1 to 2 weeks of total disability; this time being necessary on account of the contused condition of the soft tissues around the bone. Preferred risks who are not brought in contact with people generally demand from 3 to 7 days of total disability. Slight concussion of the brain or a fracture of the superior maxillary bone in conjunction with this injury, requires from 2 to 4 weeks of total disability in preferred risks. Uncomplicated cases of fractures of the malar bone occurring in ordinary risks seldom ask for more than from 1 to 2 weeks of total disability. Compound fractures of the bone in preferred risks increase total disability from 7 to 10 days, when no brain complications are present.

PARTIAL DISABILITY in preferred risks is frequently demanded, and from 1 to 3 weeks may be allowed. Ordinary risks are not entitled to any partial disability.

EFFECTS: Uncomplicated fractures of the malar bone cause a slight flattening on the injured side of the face which is hardly noticeable. When the orbital plate is fractured and slightly displaced, more or less protrusion of the eyeball on the affected side may result. Individuals suffering from this injury which has not been complicated by concussion of the brain are insurable for any kind of a policy from two to three months after the date of accident,—provided no permanent injury to the eye has followed.

FRACTURE OF THE SUPERIOR MAXILLARY

INFORMATION: Fractures of this bone are usually due to direct violence or by transmitted force from blows on the chin; sometimes the alveolar process is broken by the extraction of a tooth, but in such cases an accident policy is not intended to cover the disability. On account of the position of this bone, violent force is necessary to produce a fracture, and when this occurs it is frequently complicated by fractures of adjoining bones or concussion of the brain. The fracture is often a compound comminuted one.

SIGNS AND SYMPTOMS are severe pain which is worse when the jaws are closed tightly, great swelling and discoloration of the face, inability to masticate food, irregularity in the line of the teeth of the upper jaw on the affected side, and when the antrum is broken in, there is a depression over this part. Emphysema of the face sometimes follows, and when this is seen it is due to a rupture of the mucous membrane which permits air to be forced into the cellular tissue. Injury of the infraorbital nerve which emerges through the infraorbital foramen may occur, when numbness and anesthesia of the part of the face supplied by it will be present.

COMPLICATIONS: *Secondary Hemorrhage* may result when branches of the external maxillary artery have been injured, and if this complication arises danger to life is present, although disability is not prolonged.

Concussion of the brain may complicate a blow of sufficient force necessary for a fracture of this bone. If the concussion is slight, disability is not prolonged, but if severe total and partial disability may be greatly increased by this complication.

Compound or Comminuted Fractures may become infected and greatly prolong disability. This is especially true if the antrum is opened and infection follows in this situation.

TOTAL DISABILITY lasts from 3 to 6 weeks in preferred risks when the duties of the occupation require singing or constant talking. In some classes when the duties require the use of the hands and brain, such as office work, etc., this disability generally persists for 2 to 3 weeks only. Ordinary risks suffering from such a fracture without complications usually require from 3 to 4 weeks of total disability. Compound fractures of this bone are

mostly through the mucous membrane, and in such cases disability is not prolonged by this complication. When the external surface is involved, total disability is increased from 7 to 10 days in preferred risks. Complications may arise and prolong the disability according to the length of time required by the complication for recovery.

PARTIAL DISABILITY is sometimes payable to preferred risks suffering from the above fracture, when the duties of the occupation demand much use of the voice, when from 1 to 3 weeks are generally allowed. Ordinary risks are not entitled to any partial disability.

EFFECTS: This bone is so well supported by its neighbors that very little displacement occurs after a fracture, and, therefore, deformity is slight. This shows mostly by an unevenness in the line of the teeth and may result in digestive disturbances, on account of inability to properly masticate food or the loss of one or more teeth at the time of the accident. If a fracture at the base of the skull or a concussion of the brain does not complicate this injury, the party is insurable for any form of insurance from six to nine months after the date of accident.

FRACTURE OF THE INFERIOR MAXILLARY

INFORMATION: Fractures of the inferior maxillary may result from direct force when the jaw is brought in violent contact with a hard substance, as in falling or when the body is in an upright position and the jaw is struck. If the fracture occurs as the result of a personal encounter, the individual being struck by a clenched fist, an accident policy does not cover the disability; unless the injured party has been attacked without cause and is protecting himself. Fractures of this bone usually occur between the symphysis and the canine tooth, although the ramus may be broken at some part. The inferior maxillary is frequently fractured and the mucous membrane torn in the majority of cases, thus producing compound fractures.

SIGNS AND SYMPTOMS are unnatural mobility between the two sides of the lower jaw with crepitation on movement, pain, much swelling and discoloration of the skin with swelling and bleeding of the gums and the constant dribbling of saliva; deformity also exists, the teeth are not on an even plane, one or two at or near the fracture being loosened. After several days

the glands under the jaw enlarge and a foul odor is present, this being due to the decomposition of blood in the mouth.

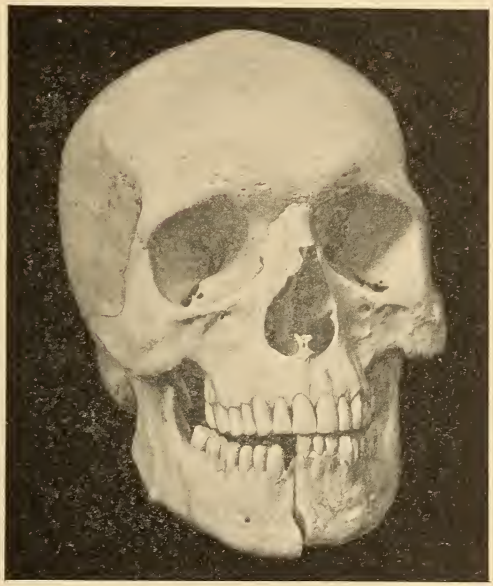


Fig. 21.—Fracture of the lower jaw, showing loss of alinement of teeth. (Scudder).

COMPLICATIONS: *Infection* usually occurs on account of the ruptured mucous membrane and suppuration may persist and cause necrosis of the bone of the jaw, thus greatly prolonging disability. Digestive disorders and diarrhea follow from inability of the individual to properly masticate food and also from the swallowing of blood and infected discharges from the opening in the gums, but these latter complications seldom prolong disability.

TOTAL DISABILITY: Preferred risks suffering from a fracture of the inferior maxillary and who require constant use of the voice in singing or talking are totally disabled from 4 to 6 weeks. In the same class of risks when the occupation is not as above, from 3 to 4 weeks of this disability are generally considered equitable; this time being necessary on account of the bandages which must be worn and which prevent the individual from following his occupation. Ordinary risks demand from 3 to 5 weeks of this disability. The inferior maxillary seldom presents a compound fracture externally, but when such a condition exists, total disability is not often increased. Complications do not often pro-

long total disability, for the reason that as soon as union is complete between the two fragments the individual can return to his occupation, even though suffering from a slight necrosis of the bone or digestive disorders.

PARTIAL DISABILITY is payable in addition to the above total and lasts from 1 to 2 weeks in preferred risks. Ordinary risks are not entitled to any partial disability. If necrosis of the jaw ensues, this form of disability may be necessary and may last from 3 to 6 or 8 weeks. If intestinal troubles follow, partial disability is sometimes payable, allowing from 1 to 3 weeks, according to the severity of this complication.

EFFECTS: Fractures of this bone do not always unite perfectly, when there is more or less deformity not noticeable from the external surface, but which prevents the proper mastication of solid foods and may cause chronic indigestion to follow. Unless this condition ensues, there would be no impairment of any kind and the individual is insurable for any form of a policy three months after the date of accident.

CHAPTER VII

INJURIES TO THE NECK INCLUDING THE LARYNX AND TRACHEA

PART I

ABRASIONS AND CONTUSIONS OF THE NECK

INFORMATION: These injuries occur to the neck accidentally or by intent and are produced by contact with hard substances. Abrasions are not very frequent, while contusions of the neck are often seen and are usually due to blows received in personal encounters. Hard blows to the neck may cause a contusion that will end in unconsciousness or even death. The parotid or submaxillary gland, the hyoid bone or the cartilage of the larynx are sometimes injured as the result of a contusion, when disability is greatly prolonged. If disability results from a contusion involving the neck and the injury has been received while the claimant was under the influence of liquor or in an ordinary fight, indemnity will not often be paid by an insurance company, as the policy usually excepts such conditions.

SIGNS AND SYMPTOMS: Abrasions of the neck produce the same signs and symptoms as do abrasions of any part of the body and are readily diagnosed; they generally heal without any complications and no disability results. Contusions to the neck, however, and especially severe ones, cause swelling and discoloration. Sometimes there is a fracture of the hyoid bone or the cartilage of the larynx, when there may be emphysema of the neck and chest or edema of the larynx may become so marked that death ensues. Hemorrhage into the larynx if in sufficient quantity will produce asphyxiation. Contusions to this part of the body can injure either one of the glands on the side of the neck and cause an abscess to develop, and this will be attended by the usual signs and symptoms. Pain is always present after a blow to the neck, swallowing is difficult, and if the swelling is

sufficient there may be impairment of hearing on the injured side; breathing may also be affected by pressure on the trachea.

DIFFERENTIAL DIAGNOSIS: *Parotitis or Mumps* is sometimes claimed as a contusion to the neck. This disease is of rather sudden onset beginning with a chill followed by fever from 100° to 103° F, headache, increased pulse rate and swelling of the parotid gland with stiffness of the neck. This swelling lasts from six to seven days, when it subsides, or the gland of the opposite side is involved and goes through the same process. In three per cent. of the cases of mumps, mammary glands, ovaries and the testes are involved, and when this involvement occurs it is sufficient evidence that the swelling of the gland is not due to a contusion, but to a well defined disease.

Tuberculous Adenitis is a specific infection of the glands of the neck by the tubercle bacillus. This first causes a swelling of the glands on the side of the neck accompanied by redness, induration and fever, and later the formation of pus which is evacuated by nature or through an incision. An individual who is tuberculous or who has suffered from a swelling of these glands without suppuration, may have an inflammation set up by a blow to the neck and this go on to abscess formation. Such a condition would be hard to properly diagnose, and if there were well marked signs and symptoms of a blow, an insurance company would probably have to pay indemnity for the resulting disability, even though the suppuration was due to a tuberculous infection.

Tumors of the neck can exist and when a blow is received in this situation the swelling may be claimed to be due to the injury. These tumors are of slow growth, movable, painless and usually encapsulated. If there is any suspicion that the swelling is due to a tumor or other cause, even though there may be discoloration and evidence of a blow, the diagnosis can be properly made by waiting until the discoloration disappears, when the swelling will also go if due to a contusion; if a tumor, it remains.

Thyroid Gland: Swelling of this gland or goitre is usually seen in women and would hardly be mistaken as a swelling due to a blow. This gland may enlarge, however, as the result of an injury, in which case a history of an accident with discoloration would be ascertained.

COMPLICATIONS: *Torticollis or Wry-neck* usually involves one side of the neck only and results mainly from a contraction of the sterno-cleido-mastoid muscle. Occasionally this condition

is acute and is the result of colds or blows to this part of the body. When it has been present a long time, there is an atrophy of the

Fig. 22.—Front view left sided torticollis. (Keen)

Fig. 23.—Back view left sided torticollis. (Keen).

muscles on the opposite side of the face and neck. Acute cases are accompanied by pain and swelling, in addition to the contraction of the muscle which produces this condition.

Emphysema occurs after a blow to the neck which has been sufficient to rupture the mucous membrane of the trachea, when air is diffused in the cellular tissue, causing swelling and crepitation under pressure.

Fracture of the Hyoid Bone rarely results from a severe abrasion or contusion of the neck. If this occurs, see description of Injuries of the Larynx and Trachea.

Erysipelas may complicate any abrasion of the neck, appearing from two to seven days after the injury has been sustained. If this disease follows an abrasion which would cause little, if any, disability, an insurance company would hardly pay indemnity under an accident policy for the disability caused by the disease, as it would be impossible to say if the erysipelas was contracted at or before the time the abrasion was sustained. For description of the duration of this disease, see Erysipelas under Diseases of the Skin.

Suppurating Parotiditis: A contusion of the neck may be sufficiently severe to injure the parotid or submaxillary glands and cause an abscess to form; if this occurs and a fistula results, heal-

ing is greatly prolonged. Should either of these glands suppurate as the result of a blow in which there is no question about the injury being inflicted, an insurance company would probably be liable for the length of disability caused by the blow and the resulting abscess.

TOTAL DISABILITY: Preferred risks suffering from an abrasion of the neck which is uncomplicated, are not entitled to any total disability. If erysipelas develops, it is questionable if the company is liable for indemnity during the period of disability caused by this disease. All classes of risks suffering from a contusion of the neck are entitled to little, if any, total disability, unless the injury has been so severe as to cause one or more complications to arise, when the length of disability is determined according to the complication, and the question of liability must also be settled at that time. Torticollis following a contusion of the neck may require total disability of 1 week in preferred risks as the price of a release, although an individual suffering from this condition is not totally disabled. If the parotid or submaxillary glands suppurate as the result of an injury, total disability may last from 1 to 2 or 3 weeks, but as this disability would not immediately follow the blow, it is questionable if an insurance company would recognize liability, probably claiming that the abscess was not caused by the blow, for the reason that it would not appear until some time had elapsed. Emphysema following a contusion of the neck would cause total disability of from 3 to 7 days in all classes of risks. A tuberculous abscess of the glands of the neck when claimed to be due to a contusion may cause total disability for an indefinite period, and an insurance company would not likely assume liability for indemnity under such a condition, even though there might be a history of a blow of more or less severity.

PARTIAL DISABILITY is not payable to any class of risks following an abrasion or contusion of the neck.

EFFECTS: Simple abrasions or contusions to this part of the body which cause no complications, result in no impairment of the risk, the individual being insurable for any kind of a policy from one to two months after the date of injury. If a complication arises, the effects on the insurability of the risk must be considered according to the complication which was present.

INCISIONS AND LACERATIONS OF THE NECK

INFORMATION: Incised or lacerated wounds of the neck may be superficial or deep, and any wound which goes below the deep fascia may be considered more than superficial. These wounds are produced by any sharp or blunt instrument which cuts or lacerates the soft tissues of the neck and may be accidental in origin or by intent. Suicides generally attack the neck for this purpose with a sharp instrument, the cut being directly across the neck in front and on the sides; therefore any incised or lacerated wound that has apparently been produced by a sharp instrument should be carefully investigated and the fact determined whether the wound was self-inflicted or accidental. The class of wounds which go deeper than the deep fascia usually involve some of the important blood vessels and nerves of the body; or the trachea or esophagus is injured.

SIGNS AND SYMPTOMS: Evidence of an incised or lacerated wound is apparent to the eye. There is hemorrhage which may be arterial or venous in character, depending on whether a large artery or vein has been severed. If the wound is deep and a part of the muscles of the neck are separated, partial control of the head is lost. When a wound involves the trachea, there is an escape of air through the incision; if the esophagus is open, swallowing is impossible and there is vomiting of blood which finds its way into the stomach. The character of the weapon which causes the wound should be ascertained; if this is known it is possible in many cases to approximate the damage inflicted.

COMPLICATIONS depend on the location and depth of the wound. Superficial wounds may be followed by infection or erysipelas may develop. Deep wounds which have injured some of the important contents of the neck may cause complications according to the part injured,—if death is not produced at once by the incision or laceration.

An Abscess sometimes follows and is situated beneath the deep fascia of the neck when the wound has penetrated beyond this point. In such cases it may be difficult to diagnose the condition on account of the pus being so deeply seated, but the possibility of it traveling downward into the thorax must be remembered.

Bronchitis and Broncho-Pneumonia may develop after such an injury and be due to the inhalation of cold air or septic matter taken into the lungs when breathing. Disability is prolonged by such a complication and indemnity under an accident policy would probably only be paid for the time required by the wounds for complete healing, provided the injury was not self-inflicted.

Emphysema may complicate deep wounds which involve the trachea and becomes so extensive as to affect the whole neck and chest.

TOTAL DISABILITY following superficial incised or lacerated wounds should not be allowed to any class of risks unless the cuts or lacerations are very extensive, when from 3 to 7 days may sometimes be necessary. Deep incisions or lacerations cause total disability according to the location, depth and the character of the underlying tissue which is injured. Deep cuts which may or may not become infected and which do not involve the trachea or esophagus require from 1 to 3 weeks of total disability in all classes of risks, and this time is usually necessary on account of the shock from loss of blood which follows at the time the injury was inflicted. If the wound involves the trachea or esophagus, an operation may be necessary for suturing these parts together; in which case total disability in all classes of risks will last from 3 to 6 weeks.

PARTIAL DISABILITY is hardly allowable to any class of risks following incisions or lacerations to the neck, unless the individual has suffered the loss of a large amount of blood and total disability is comparatively short, when from 1 to 2 weeks of partial disability may be allowed to preferred risks.

EFFECTS: A more or less prominent scar which can be covered in some cases always results from an incised or lacerated wound. The prominence of this scar depends on its position, length, depth, and if followed by an infection or not. When the trachea or esophagus has been injured, there may be permanent difficulty in breathing or swallowing. Individuals suffering from this class of wounds which are self-inflicted are not insurable and will not be insured by any insurance company for any kind of a policy if a history of the case is known. When the wounds have been sustained accidentally and no resulting deformity is present, individuals are insurable for any kind of a policy from one to two months after complete recovery.

PUNCTURED WOUNDS OF THE NECK

INFORMATION: Punctured or perforating wounds of the neck are not frequent, but when they do occur they are generally extremely dangerous, causing death at once; or they are slight and cause practically no damage to the important contents of the neck. These wounds are produced by missiles propelled by gunpowder or other foreign bodies which may come violently in contact with the soft tissues of the neck, and by long, sharp-pointed instruments such as stilettos and knife blades.

SIGNS AND SYMPTOMS depend on the character of the instrument which produces the injury and also the location and parts involved. Bullet wounds, which are perforating, produce an opening at the point of entrance which is smaller than the missile itself, while the point of exit is larger and surrounded by lacerated tissue. Punctured wounds from daggers are evident and in addition are complicated by an incision which occurs at the time the instrument is forced into the neck or when it is withdrawn. In every case there is evidence of the wound, hemorrhage which may be slight or severe, pain, shock, and if the trachea or esophagus has been punctured, breathing through the opening or vomiting of blood which has been swallowed occurs.

COMPLICATIONS: *Infection* almost invariably follows a punctured or perforating wound to this part of the body, thus prolonging disability.

Tetanus may develop, and this is especially true if the wound has been caused by the discharge of fire-arms which have been held close to the body.

Emphysema of the cellular tissues of the neck and front of the chest sometimes occurs when the trachea has been punctured.

Aspiration Pneumonia may follow a wound which injures the trachea. If this disease complicates the injury, disability is greatly prolonged and in some cases death may result on account of the complication and not from the accident. Under these circumstances an insurance company would be liable for indemnity covering the time required for recovery from the accident; and if death from pneumonia occurs it could not be claimed as accidental.

TOTAL DISABILITY following punctured or perforating wounds of the neck which do not injure any of the important parts cause from 3 to 7 days of total disability in preferred risks. Ordi-

nary risks demand from 2 to 4 days under the same circumstances. When a punctured wound of the neck severs any of the important blood vessels or nerves and is followed by infection, all classes of risks are totally disabled from 1 to 2 or 3 weeks. If the trachae or esophagus has been injured and an operation is necessary, total disability may last from 3 to 6 weeks in all classes. Punctured wounds which sever any of the deep blood vessels of the neck and cause the individual to become almost exsanguinated, require from 3 to 6 weeks of total disability; this time being necessary on account of the great loss of blood.

PARTIAL DISABILITY is not deserved in any class of risks following punctured wounds of the neck, except in preferred risks when the hemorrhage has been severe and a short period of total disability only has been suffered; in these cases from 1 to 2 weeks may sometimes be necessary.

EFFECTS: A scar always results from this class of wounds, but generally it is not prominent, and if so situated may be hidden by the beard or clothing. If the wound heals properly and no difficulty in breathing or swallowing remains, an individual is insurable for any kind of a policy from one to two months after healing is complete; provided the injury has been sustained accidentally. Persons suffering from punctured or perforating wounds which have been self-inflicted, are not insurable for any kind of a policy during the remainder of their lives.

BURNS AND SCALDS OF THE NECK

INFORMATION: The neck, together with the face, is often involved in these injuries which may be caused by contact with boiling liquids, steam, flames, superheated metals or acids. All degrees of burns and scalds to the neck are met with, from the most superficial, which cause no disability, to severe injuries causing prolonged disability and resulting in permanent scars and deformity.

SIGNS AND SYMPTOMS: Following a scald from hot liquids or steam, there is redness, swelling and the formation of blisters. If the scald is more severe, in addition to the blister the flesh is literally cooked and a slough forms and is thrown off. When the injury is a burn from hot metals or acids, the same signs are seen unless the burn is very severe when the flesh is carbon-

ized. Acid burns are usually in streaks and spots and only the superficial surfaces are involved. There is pain, tenderness, more or less nervous shock, some rigidity of the neck and in many cases infection with a discharge of pus.

DIFFERENTIAL DIAGNOSIS: *Pemphigus* in some stages presents the appearance of a superficial scald, but as this disease is chronic and is most common on the limbs and the blebs occur in crops and on persons who are debilitated, there is not much chance of making an error in the diagnosis.

COMPLICATIONS that follow any wound which breaks the surface of the skin are liable to occur when a burn or scald is sustained.

TOTAL DISABILITY in preferred risks lasts from 5 to 10 days when the burn or scald is moderately severe and occupies an area several inches in diameter; if an infection complicates the injury, total disability may be prolonged 1 to 2 weeks. If the burn or scald is severe and destroys not only a large area of skin, but also some of the deeper tissues, total disability in preferred risks lasts from 3 to 5 weeks. Ordinary risks do not often demand total disability for superficial burns or scalds, but when the burn has been deep and severe it may be necessary to pay from 2 to 3 or 4 weeks.

PARTIAL DISABILITY is sometimes payable to preferred risks when the period of total disability has been short; in such cases from 1 to 2 weeks are usually demanded. Ordinary risks are not entitled to any partial disability unless the burn or scald has been very severe and the period of total disability is greatly prolonged, when from 1 to 2 or 3 weeks are sometimes necessary under these circumstances and the occupation permits a part of the work being performed.

EFFECTS: Scars always follow burns or scalds of the neck which are more than superficial in depth. These scars may be so situated that they can be covered up and produce no disfigurement. When the injury has been severe and a large scar results, it almost invariably contracts, drawing the skin and producing deformity not only of the neck, but in many cases involving the face. Individuals who have suffered from burns or scalds of the neck which do not injure any of the large vessels, nerves, the larynx, trachea or esophagus are insurable for any kind of a policy from one to three months after complete recovery.

PART II

INJURIES TO THE LARYNX AND TRACHEA

INFORMATION: The larynx and trachea being superficially situated are subject to injuries which may be external or internal in origin. Injuries from external causes are usually incised wounds which are suicidal or homicidal in intent, contusions, punctured wounds, and in rare cases fracture of the cartilages of the larynx or trachea. When the larynx is injured from the inside, it may be due to the inhalation of steam or the entrance of caustic fluids when an attempt is made to swallow them, and foreign bodies which cut, lacerate or contuse the internal surfaces of these parts.

SIGNS AND SYMPTOMS following injuries to the larynx depend on the character of the accident. Blows to the neck which

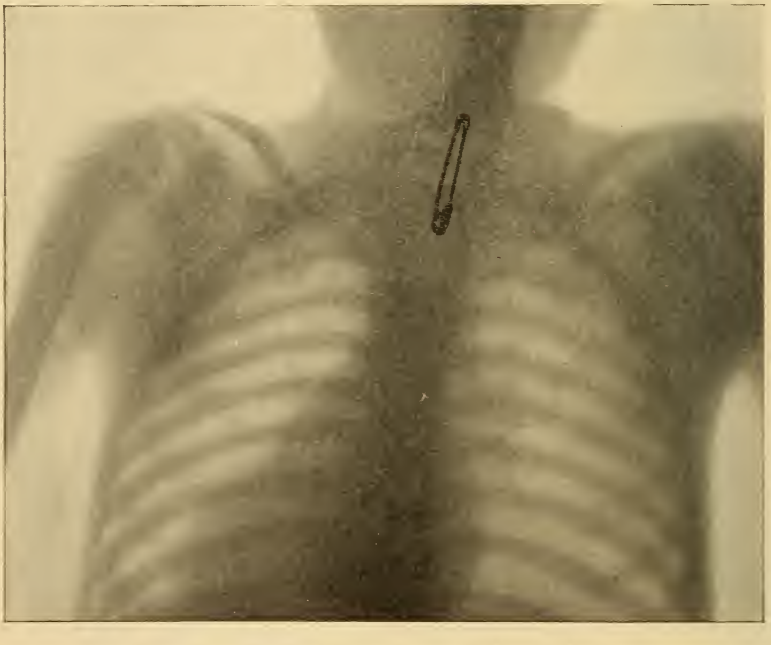


Fig. 24.—X-ray of foreign body in Trachea. (Eisendrath).

injure the larynx are followed by pain, localized swelling and ecchymosis with a change in the tone of the voice, and if the mucous membrane has been lacerated, slight hemoptysis occurs, but it may be so severe as to cause death within a short time. If fractures of the larynx exist, they are generally found involving the thyroid and cricoid cartilages when pain, inability to speak, cough with bloody, frothy expectoration and dyspnea are present and later edema and discoloration of all the tissues surrounding the injury. If the wound has been an incision there is pain, hemorrhage, an escape of air through the cut and in some cases emphysema of the surrounding tissue with cough and expectoration of bloody frothy mucus. When the injury involves the inside of the trachea, foreign bodies produce cough, severe spasmodic dyspnea, expectoration, pain, edema and in many cases a fatal result follows unless tracheotomy is performed immediately. Burns or scalds usually produce edematous laryngitis, and this is characterized by pain, dyspnea, rapid and extensive edema and often early death. If this does not occur, sloughing of the damaged tissue follows and later scars which cicatrize and produce strictures, cause great difficulty in breathing and speaking.

DIFFERENTIAL DIAGNOSIS: *Incisions* involving the larynx and trachea when suicidal in intent are said to be across the front of the neck and consist of short cuts which may be sufficiently deep to sever the esophagus. The position of incised wounds of the neck involving the larynx and trachea is almost sufficient (according to some authorities) for a diagnosis as to the manner of production, whether intentional or accidental.

COMPLICATIONS: *Edema* of the larynx is the most frequent complication following any kind of injury which involves this part of the body. It is due to an infiltration of fluid into the sub-mucous or connective tissue and may occur with great rapidity, destroying life by suffocation, unless an operation is quickly performed.

Abscess of the Larynx is most common following a disease of the cartilages, but has been known to occur when an injury to this part of the body has been sustained. It is diagnosed by means of a laryngoscope.

Ulcers of the Larynx sometimes follow when a foreign body has become imbedded in the mucous membrane and remains there for some time. These ulcers, however, are generally produced by other causes and are found under a laryngoscopic examination.

TOTAL DISABILITY following accidental injuries to the larynx or trachea depends on the cause, extent of the injury and the occupation. Severe contusions may result in death in from 1 to 2 or 3 days, if not, total disability may last from 1 to 2 weeks unless a tracheotomy has been performed, when the disability is increased to 2 to 4 weeks. If a fracture of the hyoid bone or some part of the cartilage exists, total disability in all classes of risks may last from 2 to 4 weeks. Individuals without regard to occupation, suffering from an incision or laceration are totally disabled from 3 to 6 weeks and sometimes longer. If the injury is sustained to the mucous membrane, this disability is very uncertain, lasting from 1 to 2 weeks in moderately severe burns from steam or caustics to 4 to 6 or 8 weeks in severe ones.

PARTIAL DISABILITY is not often deserved following injuries of the larynx or trachea, for the reason that as soon as an individual can resume part of his occupation, he can attend to all the duties.

EFFECTS: Contusions which do not produce death leave no permanent defects and the individual is insurable from three to six months after the date of the accident, unless the contusion has been produced by a self-inflicted attempt at strangulation, when such a person would never be insurable for any kind of a policy. Incisions or lacerations which penetrate the larynx or trachea may result in complete recovery and no permanent defect in speech or breathing; such individuals are insurable for any kind of a policy from one to two years after complete recovery. If the injury leaves a permanent deformity of any kind, the injured party is not insurable under any form of policy. Scars result from incised or lacerated wounds to this part of the body, but as the location is usually below the line of clothing, they are seldom noticeable. Severe injuries to the inside of the larynx or trachea, such as burns or scalds, almost invariably result in scars which contract and narrow the lumen, this may be so pronounced that difficulty in speaking or breathing is present. In such cases, an insurance company would not issue any form of policy.

CHAPTER VIII

ACCIDENTAL INJURIES INVOLVING THE CHEST, ABDOMEN AND BACK WHICH RESULT IN DISABILITY

PART I

CHEST

ABRASIONS AND CONTUSIONS

INFORMATION: Abrasions and contusions of the chest are not uncommon. When abrasions occur, usually some other part of the body is injured, and if disability ensues, it is almost invariably caused by the more serious injuries. Contusions of the chest may be sustained and result from severe blows, from squeezing by railroad cars and other means and by being run over by vehicles of all descriptions. When a severe contusion of the chest is suffered, the injury may involve the soft tissues only and no resulting fracture of any of the bones which enter into its formation follow. This is due to the elasticity of the chest walls. The contents of the cavity, however, may be badly injured, such as a rupture of the heart, pericardium, lung or some other large vessels contained in the mediastina. Severe pressure of the chest walls which will rupture some of the contents of this cavity will often produce slight, if any, external evidence of the damage done inside. Heavy automobiles passing over persons produce serious injury to the contents of the chest, but show little evidence on the outside.

SIGNS AND SYMPTOMS: Evidence of an abrasion to this part of the body is apparent on inspection. Contusions may cause swelling, more or less discoloration, tenderness on pressure and pain on deep breathing, which is made much worse by coughing or sneezing. When the injury causes damage to any of the thoracic viscera, the signs and symptoms are such as would come

from the organ concerned. A contusion of the lungs causes severe pain, cough, slight hemoptysis and paroxysmal dyspnea, to be followed later by dullness over the injured area, crepitation and expectoration of rusty sputum. If the lung is ruptured and collapsed, there is pain, hemorrhage, severe shock, dullness on percussion over the fluid and hyperresonance over the air cavity. When the heart or pericardium is injured by a contusion, severe shock is the most prominent symptom, and is followed either by death or a pericarditis. Shock is always a prominent symptom in injuries involving these parts and may be nervous in origin or due to loss of blood which follows a rupture of some of the blood vessels or viscera of the chest cavity. Hemorrhage may be slight or severe and is sometimes concealed; at other times expectoration of blood occurs.

COMPLICATIONS: *Fractures of the Sternum, Ribs or Vertebræ* may occur when contusions of the chest are sustained. If these complications arise, see description of the complication under the proper name.

Pneumothorax generally results if a fractured rib penetrates the lung, when there is complete or partial collapse, indicated by bulging of the intercostal spaces, increasing dyspnea, tympanitic resonance and absence of breath sounds.

Hemothorax usually follows when an intercostal artery has been wounded and is diagnosed by bulging of the intercostal spaces over which dullness exists and rapidly extends, increasing difficulty in breathing and absence of breath sounds over the collection of blood.

Emphysema of the chest walls not uncommonly follows when the lung has been ruptured, even though a fracture of the ribs is not sustained at the time of the accident.

Pneumonia and *Pleurisy* sometimes follow severe contusions of the chest and may terminate fatally. For description of these complications see Pneumonia and Pleurisy.

The Heart or Pericardium may be ruptured when the body has been violently squeezed between two movable objects or between wheels and the pavement. If the heart is ruptured, death of course occurs immediately. If the pericardium is the part injured, shock may be so severe as to result in death or a long period of disability.

Rupture and Collapse of the Lungs may follow a severe contusion, when the period of disability will be uncertain and some

other complication, such as pneumonia, pleurisy, abscess or gangrene generally results.

TOTAL DISABILITY following simple contusions of the chest which involve the walls only, produce total disability of 3 to 7 days in preferred risks. Ordinary risks seldom demand any total disability for this kind of injury unless it has been very severe, when 3 to 7 days are also necessary. If a contusion of the chest produces a jarring or concussion of the contents of the chest cavity and no further injury, total disability in all classes of risks lasts from 1 to 3 weeks. More severe contusions result in death at once or produce long periods of disability lasting from 4 to 6 or 8 weeks in all classes of risks. If complications arise after severe contusions, the length of disability is prolonged according to the time required for recovery of the complication.

PARTIAL DISABILITY is not often demanded, except following very severe injuries, when the length of time will depend on the organ injured and the period of total disability. These periods of partial disability, however, are usually long and last from 3 to 6 or 8 weeks.

EFFECTS: Individuals suffering from slight uncomplicated contusions of the chest, are insurable for any kind of policy from two to three months after the date of accident. If the contusion has been severe and some of the organs of the chest cavity have been injured, insurability would depend on the character of the injury and the resulting period of disability; it being necessary also to consider any complications which might arise. Insurance companies would hardly grant any form of policy to a person who had suffered from a severe contusion of the chest until one to three years had passed without any signs or symptoms appearing as a result of the injury.

INCISIONS AND LACERATIONS OF THE CHEST

INFORMATION: Incised or lacerated wounds of the chest wall are produced by sharp or blunt instruments which cut cleanly or lacerate the tissue. On account of the formation of the chest, these injuries can be superficial only, unless they become penetrating or punctured wounds, when they are considered under those heads.

SIGNS AND SYMPTOMS: Incised wounds produce extensive hemorrhage, separation of the wound edges, pain, tender-

ness and sometimes infection. Lacerated wounds tear and lacerate the tissues in a ragged manner, causing some hemorrhage, bruising of the parts with discoloration, pain and frequently infection.

Any Complication that is liable to follow a rupture of the continuity of the skin may complicate incised or lacerated wounds of the chest.

TOTAL DISABILITY: Incised wounds of the chest which are two or three inches in length and require several stitches, usually demand from 3 to 10 days of this disability in preferred risks. Ordinary risks under the same condition frequently ask for 1 to 2 weeks. Lacerated wounds of the chest involving a considerable area and which become infected require from 1 to 3 weeks of total disability in all classes of risks.

PARTIAL DISABILITY is not often deserved by any class of risks following an incised or lacerated wound of the chest which does not produce injury to any of its contents and should seldom be paid.

EFFECTS: This class of wounds heal and leave a superficial scar, but as this is covered by clothing it is not perceptible and the risk is insurable for any kind of a policy from one to two months after the date of accident.

PUNCTURED WOUNDS OF THE CHEST

INFORMATION: Wounds of the chest wall that are produced by any sharp-pointed instrument may penetrate into this cavity or on account of the position in which the instrument is held, it may travel a considerable distance under the skin without penetrating. Missiles propelled by gunpowder produce punctured wounds of the chest, and if the missile goes completely through, it becomes a perforating wound. Weapons such as long daggers or swords produce perforating wounds of this cavity. These wounds are dangerous, according to the position of the organ or tissue involved. Punctured or perforated wounds which involve the heart are almost invariably fatal at once, although recently some cases of punctured wounds of the heart have been successfully treated and recovery has followed. In perforating wounds by bullets, the point of entrance is always smaller than the point of exit, which is ragged and contused. Punctured wounds by instruments with sharp edges are complicated with an incision which is made when the weapon enters or is withdrawn from the chest.

SIGNS AND SYMPTOMS: Wounds of this kind which do

not enter the chest cavity produce pain, swelling, bleeding, slight shock and short periods of disability. If the weapon enters the chest cavity and injures the lung, there is evidence of the puncture externally, pain and hemorrhage which comes from the point of entrance with cough and expectoration of blood. When air enters the chest through a punctured wound, collapse of the lung ensues and a hissing sound as it passes in and out of the chest cavity can be heard at the location of the wound; evidence of this

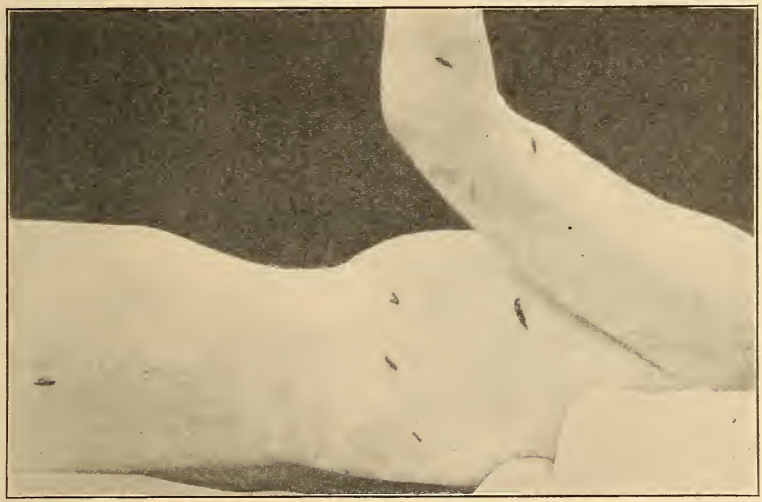


Fig. 25.—Punctured wounds of the chest and arm by dagger. (Draper).

is often seen when the opening is filled with blood and mucus. When the heart is injured by any weapon, death usually takes place immediately, if not, there is extreme pain in the region of the heart followed by rapid and difficult breathing, irregular and unsteady pulse, shock, collapse and hemorrhage. Shock is always a prominent symptom of penetrating wounds of the chest.

COMPLICATIONS: *Hemothorax* is almost invariably caused by a punctured or penetrating wound of the chest or a fracture of one of the ribs, the broken end of which projects into the pleural cavity. This collection of blood often becomes infected and results in empyema.

Empyema is the term applied to a collection of pus in the chest cavity and frequently follows any wound which ruptures the pleura; it is due to an infection which enters the cavity at the time the injury occurs or at a later date.

Pneumonia is a complication following punctured wounds of

the chest or any mechanical injury to the lung which causes a deterioration of the lung tissue and permits the diplococcus of pneumonia to find a suitable soil for its propagation.

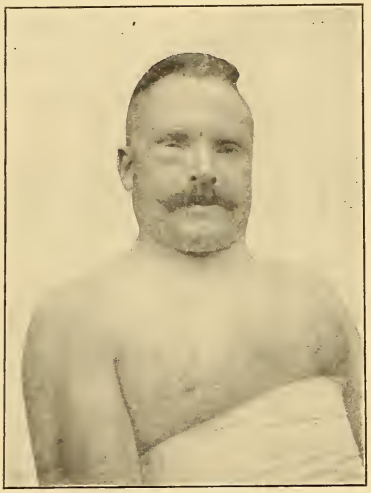


Fig. 26.—Emphysema following fracture of the ribs on the right side. Note the puffiness of the face—the eyes almost closed. (Warren).

Subcutaneous Emphysema may be present after a puncture of the chest and is generally seen occupying an area of several inches around the wound, although it may extend and involve the chest and neck and even the whole trunk, including the head and scalp.

Pneumocele rarely follows a punctured or penetrating wound of the chest, although it may be present and is due to violent spells of coughing which force a small part of the lung through the wound.

Gangrene of the Lung may occur as the result of a punctured or penetrating wound, fractures of the ribs and sometimes from severe concussion to the brain. It is most commonly seen in diseases and is not often the result of an accidental injury.

Abscess of the Lung is sometimes traumatic in origin and may follow contusions, fractures of the ribs or sternum or gunshot injuries; such a complication greatly prolongs the period of disability.

Pericarditis as the result of injury is rare; when it occurs the usual signs and symptoms characteristic of this affection following a disease are present. This complication results in death in the majority of cases and when recovery takes place a long period of disability follows.

Punctures of the Esophagus may complicate this class of wounds to the chest. In such cases, vomiting of blood and the contents of the stomach, together with the escape of mucus and ingesta through the external wound would indicate this complication which would greatly prolong disability.

Opening in the Diaphragm: Small punctured wounds of the

diaphragm usually heal without trouble. Large rents permit the abdominal contents to escape into the chest cavity with the danger of a resulting strangulated hernia. Such cases require operation, and if the complication is not diagnosed early the condition may end fatally. If attention is given to this at the time the punctured wound occurs, disability is not prolonged.

TOTAL DISABILITY following punctured wounds of the chest depends on the character of the injury and the organ wounded. If the puncture involves the chest wall only, total disability lasts from 3 to 7 days. Punctured wounds which involve the heart usually prove fatal at once or within 1 to 3 days. If death does not follow, total disability may last from 4 to 8 weeks and even longer, depending on the location of the wound in the heart, the result of an operation if performed, and the physical condition and constitution of the individual. Punctured wounds of the lungs are generally complicated by an infection and total disability lasts from 4 to 8 or 12 weeks; if complications supervene, this disability is prolonged according to the time described under the complication. The above time applies to all classes of risks.

PARTIAL DISABILITY may be necessary following punctured wounds to the contents of the chest cavity, and in preferred risks lasts from 2 to 4 or 6 weeks, depending on the organ injured, the strength of the individual and the after treatment.

EFFECTS: Individuals having suffered from a punctured wound of the heart and survived, are not insurable for any kind of a policy unless from five to ten years have elapsed since the date of the accident, when if no signs or symptoms have appeared during that time, the application of the individual may be considered after a very careful medical examination. Injuries to the lungs which are aggravated by one of the numerous complications, would prevent an insurance company accepting any one suffering from such a condition until at least three to five years had passed after complete recovery. It is questionable, even at this time, if such risks are insurable for life or health insurance, although an accident insurance policy could probably be safely issued. Punctured wounds involving the chest walls only, produce no permanent impairment and the individual is insurable as soon as recovery is complete, provided the moral hazard is good.

BURNS AND SCALDS OF CHEST AND ABDOMEN

INFORMATION: These injuries to the anterior, lateral and posterior walls of the chest and abdomen are usually very severe and result from steam, hot fluids, molten metals and acids which come in contact with this part of the body and are often confined beneath the clothing. These burns or scalds are usually superficial in extent, but a large area of surface is frequently involved. Molten metals sometimes produce punctured wounds to either one of the cavities; but this form of burn is rarely seen.

SIGNS AND SYMPTOMS: Shock is the most important symptom following a severe burn of the chest, abdomen or back

Fig. 27.—Cicatrical contracture from a gas-flame burn six months previously. (Keen).

which destroys a large surface of skin; in addition there is swelling of the parts involved, redness, blisters, pain, tenderness, and in a few days suppuration ensues. When the burn or scald has been severe and destroys some of the tissues, sloughing follows and disability is greatly prolonged.

DIFFERENTIAL DIAGNOSIS: It would seem that no error in diagnosis should be made when a burn or scald exists of sufficient severity to cause disability. Any disease which may resemble superficial scalds would not have the acute signs and symptoms of a severe burn or scald as above indicated.

COMPLICATIONS: *Infection and Sloughing* are the most frequent complications following a severe injury of this character.

TOTAL DISABILITY in all classes of risks when a burn or scald is superficial and involves an area of two to three inches in diameter lasts from 3 to 7 days. Preferred risks are totally disabled from 2 to 3 weeks, and ordinary risks from 3 to 5 weeks in burns or scalds which involve a larger area and are complicated with infection and sloughing. Such injuries may not be healed in the above time, but this disability should not last until the healing process is entirely completed, the individual being able to return to his work when the wound is almost well. Severe burns which destroy a large area of the surface of the chest, abdomen or back, usually require skin grafting before healing is complete, and all classes of risks are totally disabled from 4 to 6 or 8 weeks and sometimes longer, this depending on the rapidity with which new skin is formed and the number of skin grafting operations necessary for the complete healing of the parts. These severe injuries are always accompanied by shock, and this serves to prolong disability.

PARTIAL DISABILITY is necessary in preferred risks who resume their occupation before healing of the destroyed surface is complete, and lasts from 2 to 4 weeks. Ordinary risks do not often return to work until new skin is completely formed and they are seldom entitled to any partial disability. Severe burns or scalds involving the whole surface of the chest, abdomen or back requiring a long period of total disability may result in greatly prolonged periods of partial disability, sometimes even running to the limit of the policy. These cases are exceptional, however, and when seen are met with in persons already debilitated from some cause.

EFFECTS: A scar always results from a burn or scald to this part of the body, and if of any depth contraction occurs and deformity exists. Injuries that have destroyed a large surface of the skin are followed by scars which contract greatly, but on account of the parts being covered by clothing, the deformity is not apparent, and unless the burn or scald involves the muscles sur-

rounding the arm, shoulder or neck, there is seldom any resulting permanent disability. Individuals who have suffered from slight or severe burns or scalds of the chest, abdomen or back which have not caused any injury to the underlying organs, are insurable for any kind of a policy from six to twelve months after complete recovery, provided no permanent disability exists.

DISLOCATION OF THE STERNO-CLAVICULAR ARTICULATION

INFORMATION: Dislocations of the sternal end of the clavicle are rare, for the reason that the ligaments surrounding

Fig. 28.—Forward dislocation of the sternal end of the clavicle. (Fowler).

the inner end of the clavicle are very strong, and in addition there is an inter-articular cartilage which serves to bind the inner end of the clavicle to the sternum and cartilage of the first rib. Displacement of the bones forming this articulation is caused by falls, in which the shoulder comes in violent contact with the

ground or by transmitted force extending from the hand or elbow up through the arm. The dislocation may be forward, backward or upward; the first of which is most frequent.

SIGNS AND SYMPTOMS: When the dislocation has been forward the inner end of the clavicle is in front of the sternum, while immediately back of it there is a depression which this end of the bone formerly occupied. The shoulder on the injured side is lower than usual, and there is localized pain, tenderness and inability to use the arm. Dislocations backward and upward are very rare and show the end of the bone to have disappeared from its normal position, and in its place there is a depression. Pain, tenderness and often pressure by the dislocated end of the bone on the trachea or great vessels of the neck exists when the dislocation is backward and causes dyspnea and redness of the face.

DIFFERENTIAL DIAGNOSIS: *Deformity* of the clavicle due to rickets usually involves the sternal end, the convex surface of the curve is forward and may be claimed as a dislocation, but absence of inflammatory signs and symptoms together with a fixed position of the bone will serve to make the diagnosis.

TOTAL DISABILITY in preferred risks lasts from 2 to 4 weeks, when the occupation requires the use of the arms, such as bookkeepers, stenographers, telegraph operators, etc.; in the same class, when the occupation consists of office duties and supervising, this disability lasts from 2 to 5 days longer. Ordinary risks are usually totally disabled longer than preferred risks and require from 3 to 6 weeks of total disability following any form of dislocation of the sternal end of the clavicle.

PARTIAL DISABILITY of 1 to 3 weeks is allowable to preferred risks whose duties require constant use of the arms; in the same class of individuals when the duties do not require much use of the arms and hands and the total disability has been short, partial disability may last from 2 to 4 weeks. Ordinary risks are not entitled to this form of disability, as they can resume all the duties of their occupation when they take up any of them.

EFFECTS: Dislocations of this joint are prone to recur, therefore, an individual who has suffered from this injury is not insurable for an accident policy, unless a waiver is placed on it eliminating indemnity for such disability. Individuals with a history of a dislocated clavicle are insurable for life or health insurance from three to six months after the date of injury, except in those rare cases where the dislocation has been backward or up-

ward and pressure has been severe on the blood vessels and nerves of the neck, when an insurance company would hardly assume any liability on such a risk until all danger from such an injury had passed.

FRACTURE OF THE CLAVICLE

INFORMATION: The clavicle is more frequently fractured than any other bone of the body, the cause being direct or indirect force, but in rare instances the injury results from violent and prolonged contraction of the deltoid and pectoral muscles.

Fig. 29.—Comminuted fracture of the left clavicle with characteristic attitude and visible deformity. (Mixter).

The bone is most often fractured at its weakest point, which is just external of its middle,—at the junction of the larger and smaller curves. It is most commonly seen in children, next in frequency being young and middle aged adults. Both clavicles may be fractured at the same time and this condition is usually caused by forcible compression of the shoulders.

SIGNS AND SYMPTOMS are localized pain, tenderness, discoloration, swelling, deformity and preternatural mobility, with loss of function in the arm on the injured side, the shoulder of which falls downward, forward and inward. Individuals suffering

with this fracture are invariably seen supporting the arm of the injured side by the hand of the opposite side. When both clavicles are fractured, marked dyspnea may occur on account of the falling forward and downward of the shoulders; this is immediately relieved when the individual assumes a recumbent position.

COMPLICATIONS: *Fractures* of this bone are usually simple, and are uncomplicated; compound, comminuted and multiple

FIG. 30.—X-RAY OF FRACTURE OF CLAVICLE. (Eisendrath). The black arrow points to the seat of fracture. The inner fragment has been pulled upward and the outer fragment is displaced behind the inner one.

fractures may occur, when infection is liable to follow. The ends of a simple fracture are wired together sometimes, when the injury becomes a compound one through surgical intervention, but disability is not prolonged on account of the operation.

TOTAL DISABILITY: If the clavicle of the right side has been fractured, preferred risks such as stenographers and writers who require constant use of the right arm are totally disabled from 4 to 6 weeks; in the same class of risks, when the left clavicle is fractured, total disability lasts from 1 to 3 weeks, and this time is increased 1 to 2 weeks if the fracture is compound. Should an operation for wiring the ends together be performed, total disability is prolonged 2 to 3 weeks. Ordinary risks require from 6 to 8 weeks of total disability for a fracture involving either one of the clavicles. If both are broken at the same time this dis-

ability lasts from 6 to 8 weeks. Compound fractures occurring to ordinary risks prolong the period of disability 1 to 3 weeks.

PARTIAL DISABILITY of 1 to 2 weeks is payable to preferred risks suffering with a fracture of the right clavicle when the duties of the occupation require more or less use of the right arm. In the same class following fractures of the left clavicle this period of disability is usually from 2 to 4 weeks. Ordinary risks are not often entitled to any partial disability.

EFFECTS: Deformity more or less prominent generally follows a fracture in any part of this bone, but no permanent disability results. Persons who have suffered from a fracture of one or both clavicles are insurable for any kind of insurance from six to nine months after the date of accident, provided, of course, good union results and there is no impairment of function.

DISLOCATION AND FRACTURE OF THE STERNUM

INFORMATION: Dislocations and fractures of this bone are extremely rare and when sustained are usually caused by violent direct force, such as a heavy weight falling on the body when it is in a recumbent position, the passing of heavy vehicles over it,

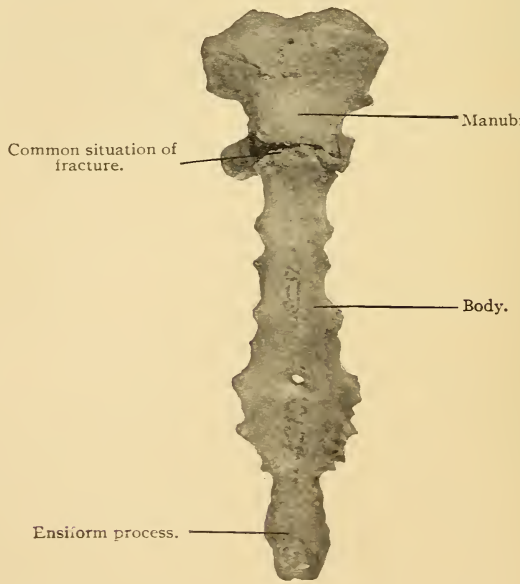


Fig. 31.—Sternum of an adult showing separation at junction of manubrium and body. (Scudder).

and by indirect force when the body is violently bent forward or backward. These dislocations and fractures are most frequent at the junction of the first and second segment of the sternum or at the articulation between the manubrium and gladiolus. Such injuries between the gladiolus and the ensiform process are very rare and need not be considered. Disability is the same following either class of injuries, and they are therefore described together.

SIGNS AND SYMPTOMS: History of the accident must always be learned for the purpose of making a proper diagnosis. There is usually displacement at the point of injury, swelling, discoloration and pain which is increased on deep inspiration, coughing or sneezing. Crepitus may sometimes be elicited by auscultation or by means of the hand placed over the fracture or dislocation. These injuries are almost always accompanied by severe internal disturbances and frequently terminate in death.

DIFFERENTIAL DIAGNOSIS: *Dislocations* generally occur at the junction of the manubrium and gladiolus, and this is the point that fractures are also most common, but as the signs and symptoms of both are practically the same, it is not difficult to make the diagnosis, and there should be no mistake in confusing this form of injury with any other accident or disease in this locality.

COMPLICATIONS mostly involve the heart or lungs, in which case see Contusions or Punctured Wounds of the Chest.

TOTAL DISABILITY: When the above injury has been sustained, death generally ends the case within 1 to 3 days. If this does not occur, total disability may last from 4 to 6 or 8 weeks in all classes of risks according to the internal complications present. Compound fractures of this bone through the skin only and not followed by infection do not prolong disability, but if infection ensues and an abscess of the mediastinum occurs, total disability is greatly prolonged, if death does not take place soon after the infection.

PARTIAL DISABILITY is sometimes claimed by preferred risks following this injury, and must be allowed if the work of the individual requires much bending or lifting; from 4 to 8 weeks may be necessary in these cases.

EFFECTS: Deformity almost invariably results after a dislocation or fracture of the sternum. If the repair has been complete and no movement exists at the point of injury and no serious complications have developed, the individual may be considered

for any kind of insurance from one to two years after complete recovery.

DISLOCATIONS OF THE COSTAL CARTILAGES

Dislocations of the cartilages of the ribs are extremely rare and may be due to direct or indirect force, the cartilage being separated at its sternal end or at its junction with the rib. The most common site of these injuries involve the seventh and eighth cartilages. As these accidents are mostly the result of a crushing force, injury to the contents of the chest cavity frequently occurs. Signs and symptoms and periods of disability are the same as for fractures of the ribs, and for these descriptions see the following article on Dislocations and Fractures of the Ribs.

DISLOCATIONS AND FRACTURES OF THE RIBS

INFORMATION: Dislocations of the ribs are so seldom met with that they scarcely need be considered. They are practically the same as fractures of the ribs, with the exception, however, that fractures are very frequent. The ribs most frequently broken are numbered from the fifth to the ninth inclusive. These injuries are more common in men in adult life and are generally due to direct force, although sometimes the fracture is caused, when the body is caught and badly squeezed between two hard substances. Fractures of these bones may be compound internally or externally, usually the former, when the uneven end of the rib tears and lacerates the pleura and lung with which it comes in contact.

SIGNS AND SYMPTOMS: Localized pain is present at the site of injury, and this is aggravated by movements of the chest wall; swelling; discoloration, and when the lung has been injured, expectoration of bloody, frothy mucus follows. There may be a slight deformity and crepitation can sometimes be felt or heard over the injury. Emphysema may be present when the fracture is compound internally.

COMPLICATIONS which may follow a dislocation or fracture of the ribs are described under the description of Contusions or Punctured Wounds of the Chest. These complications may greatly prolong disability.

TOTAL DISABILITY following dislocations or fractures

of the ribs depends on the occupation of the injured party. Preferred risks whose duties are inside and who are not required to do any lifting or reaching, are totally disabled a short time only, from 3 to 7 days in many cases. Other preferred risks, as bookkeepers, stenographers and office clerks, may require from 1 to 2 weeks of total disability. Fractures of the ribs which are compound externally prolong disability in preferred risks 1 to 2 weeks. If the fracture is compound internally in any class and one of the complications described under Punctured Wounds of the Chest occurs, total disability is controlled by the complication. Ordinary risks are prevented from returning to their occupation longer than preferred risks, and usually demand from 3 to 5 weeks of total disability. If the fracture is compound externally, disability in this class is not prolonged beyond the above time.

PARTIAL DISABILITY in addition to the above total is payable to preferred risks when the first disability is short, and from 2 to 3 weeks may be allowed. Ordinary risks are not often entitled to any partial disability.

EFFECTS: Fractured ribs usually unite without much deformity and cause no impairment of the risk for any form of insurance, provided no complication involving the heart or lungs has occurred following the accident. If any of the internal organs of the chest cavity have been injured, it would be necessary that each individual case be considered separately. If a compound fracture existed and injury to the lung resulted, the individual would not be considered insurable for any form of insurance until at least one year had passed without any symptoms referring to the accident having shown themselves.

PART II

INJURIES AND DISEASES OF THE ABDOMEN

ABRASIONS AND CONTUSIONS

INFORMATION: Abrasions of the abdomen are generally seen when more severe injuries are sustained by the individual, and seldom cause any disability. Contusions which involve the walls only are usually not severe enough to cause either total or

partial disability. If a contusion of the abdomen occurs and is so severe as to injure any of the contents of this cavity, then total or partial disability may follow, and in some cases death ensues. Contusions may be caused by violent blows to the abdomen from a clenched fist, a kick by another individual or animal, by heavy weights falling and striking this part of the body or by vehicles passing over it. Such injuries, when severe, involve some of the organs of the abdominal cavity, and the resulting disability depends on the parts injured. Severe contusions of the abdomen may result in hernia, either inguinal or umbilical, when such a condition is easily recognized and is fully described under Hernia.

SIGNS AND SYMPTOMS: Slight blows which do not injure any of the contents of this cavity may produce nausea and vomiting with some tenderness on pressure. When the contusion has been severe, the signs and symptoms are characteristic of the organ injured. If the stomach is ruptured, there may be nausea and vomiting, and if a vessel is broken, blood is vomited and serious shock ensues, this being followed by peritonitis unless an operation is performed immediately. Exceptionally severe blows may injure the sympathetic nervous system, causing death at once or after twelve to twenty-four hours. If the bladder or kidneys are involved in the injury, there is pain, followed by a discharge of bloody urine, and if a rupture of the bladder occurs, the contents of this cavity are emptied into the abdomen; externally there is swelling over the point of injury followed by pain, tenderness and discoloration. Rupture of any of the viscera of the abdominal cavity or laceration of the peritoneum is followed by distention and rigidity of the abdominal walls and a rapid and weak pulse.

COMPLICATIONS: *The Stomach* may be ruptured as the result of a severe contusion to any part of the abdomen. If this complication occurs, death results from septic peritonitis or a surgical operation is necessary, when the period of total and partial disability is greatly prolonged. The liver is frequently ruptured in severe injuries of the abdominal cavity resulting from extreme pressure. Hemorrhage into the peritoneal cavity, followed by peritonitis and operation or death is the usual end of such cases. If a fatal termination does not take place, disability is greatly prolonged.

Rupture of the Bladder is most common following punctured or penetrating wounds, but is also caused by violent compression

of the abdomen which may be due to the passing of heavy vehicles over it. Such cases terminate in cellulitis and sloughing of the perineum, resulting in death or a surgical operation for repair of the injury, thus prolonging disability.

Rupture of the Intestines may occur from severe contusions to the abdominal wall. Such injuries allow the contents of the intestines to escape into the peritoneal cavity and result in death within a short time from shock, hemorrhage or inflammation of the peritoneum or require an operation which causes disability to be greatly lengthened.

The Xiphoid cartilage is sometimes injured in a severe contusion, and if this occurs,—especially in an individual who blows a wind instrument,—disability is greatly increased on account of the inability to inflate and forcibly empty the lungs, this function being impaired from the pain which is present when forcible expiration takes place.

Injury to some of the other contents of the abdominal cavity is possible in conjunction with any of the above injuries or alone; and if it occurs an abdominal operation may be necessary to prevent death; if successful, disability lasts according to the time required for recovery of the organ injured.

TOTAL DISABILITY is not payable to any class of risks from an abrasion or contusion of the abdominal wall which is not complicated by an injury involving some of the contents. If the contusion injures any of the organs of the abdominal cavity by concussion and jarring only and does not cause a rupture, from 1 to 3 weeks of total disability are usually sufficient in all classes of risks, provided death does not occur within one to three days from the date of accident. If a rupture of any of the organs of the abdominal cavity is caused by concussion, disability is very uncertain, depending on the part injured, the constitution of the individual, the physical condition and the treatment. Death may occur in these cases at once or within 7 to 10 days as the result of peritonitis which supervenes. If life is preserved by an operation, total disability lasts from 4 to 6 or 8 weeks after the date of operation, provided it is successful and the parts heal without any complications.

PARTIAL DISABILITY is sometimes demanded by preferred risks following a severe contusion of the abdomen without serious injury to its contents, and from 1 to 2 weeks may be al-

lowed if the period of total disability has been short. Ordinary risks are not entitled to any partial disability.

EFFECTS: Abrasions and contusions of the abdomen which have not caused any serious injury, have no bearing on the insurability of a risk for any kind of insurance. Individuals suffering from severe contusions which have produced long periods of disability or caused a rupture of some of the organs of the abdominal cavity, are not insurable until one to three years have elapsed after complete recovery and no signs or symptoms have appeared in the meantime.

INCISIONS AND LACERATIONS OF THE ABDOMINAL WALLS

INFORMATION: Incised or lacerated wounds of the abdominal walls are usually complicated with other and more serious injuries to some other part of the body. Superficial wounds of this character produce little, if any, total disability. Injuries that have been caused by sharp or blunt instruments and which result in a clean cut wound or a lacerated, contused and torn one, are usually severe enough to produce total disability during the time required for complete healing. Very deep incised or lacerated wounds require careful suturing of the parts separated, and confinement to bed until the wound is entirely healed, if not, a hernia may result. Injuries of this character which penetrate into the peritoneal cavity with or without injuring any of the contents, are described under Punctured Wounds of the Abdomen.

SIGNS AND SYMPTOMS: On infliction there is hemorrhage, pain, separation of the edges in incised wounds and ragged, torn edges in lacerated ones. If the peritoneal cavity has been opened, a protrusion of some of its contents may occur. Shock follows severe incised or lacerated wounds, the severity depending on the extent of the injury and the hemorrhage which occurs at the time. Abdominal wounds which become infected are followed by pain, tenderness, swelling, redness and suppuration. If any of the organs of the abdominal cavity have been injured, signs and symptoms referring to the particular part involved are present and are described under Punctured Wounds of the Abdomen.

COMPLICATIONS: *Hernia* may occur after a long, deep, incised wound of the abdominal cavity which has not been properly sutured or supported by an abdominal bandage until the scar

becomes strong enough to prevent escape of the contents of the abdomen.

TOTAL DISABILITY in superficial incised or lacerated wounds lasts from 2 to 7 days in all classes of risks when the cut or laceration occupies a considerable area or there are a number of small incisions or lacerations widely separated. If the incision or laceration has been deep and severed some of the muscles of the abdominal wall, total disability in all classes of risks lasts from 2 to 3 weeks. If an infection follows in these wounds, this disability is prolonged 7 to 10 days. When the incision or laceration penetrates into the abdominal cavity and injures some of the contents, total disability in all classes of risks depends on the organ injured and is described under Punctured Wounds of the Abdomen.

PARTIAL DISABILITY is not deserved in any class of risks following superficial incised or lacerated wounds to this part of the body. When the incision or laceration has been deep, partial disability of 1 to 3 weeks may be necessary in preferred risks whose duties require an upright position during the greater part of the day. This form of disability is not often demanded by ordinary risks.

EFFECTS: Deep wounds of this character leave scars, and if any of the muscles of the abdominal wall have been severed and the ends not properly brought together, a ventral hernia may result. One to two months after complete recovery from deep, incised or lacerated wounds, an individual is insurable for any kind of a policy, but good underwriting would require a waiver on an accident policy eliminating disability from hernia.

PUNCTURED WOUNDS OF THE ABDOMEN

INFORMATION: Punctured wounds of the abdominal wall are divided into non-penetrating and penetrating wounds; the former of which involve the abdominal walls only and do not penetrate into the abdominal cavity. Penetrating wounds are those which go entirely through the thickness of the walls of the abdomen and enter the peritoneal cavity, either injuring some of the organs contained therein or rendering infection of this cavity possible. Punctured wounds are generally inflicted by sharp-pointed instruments such as nails, pitch forks, knives, or as the result of gunshot injuries. Stab wounds may become penetrating

ones without injuring any of the organs of the abdominal cavity; bullets from firearms may also enter this cavity and apparently produce no injuries. Penetrating wounds which are received in civil life from revolvers, shot guns, etc., usually produce much injury to the contents of the cavity, and death rapidly follows, either from loss of blood or from septic peritonitis which ensues. Bullets from high speed, modern rifles using powder which produces great velocity, do not cause such serious injuries and recovery follows in many cases.

SIGNS AND SYMPTOMS depend on the character of the wound, whether non-penetrating or penetrating. If the injury involves the wall of the abdominal cavity only and does not penetrate it, there is apparent the point of entrance from which bleeding occurs. Pain is complained of and localized tenderness may be present together with some shock. If the puncture has been made by an instrument of considerable calibre, gapping of the wound edges follows. Punctured wounds that become penetrating ones and cause injury to any of the contents of the abdominal cavity, produce signs and symptoms which are referable to the organ injured. In addition there is almost invariably a profuse hemorrhage with a low tension pulse, severe shock which is indicated by pallor, sweating, coldness of the extremities, dizziness and often unconsciousness. Nausea and vomiting usually occur in all penetrating wounds of the abdominal wall. After several hours or days, symptoms of peritonitis supervene, such as a rigid, swollen, tense abdominal wall, anxious expression of the face, rapid feeble pulse, restlessness, vomiting and generally increased temperature. Emphysema may be present either in penetrating or non-penetrating wounds and is not of much diagnostic import.

DIFFERENTIAL DIAGNOSIS between non-penetrating and penetrating wounds of the abdominal wall is highly important. Stab wounds which enter the peritoneal cavity in a straight line are easily recognized by a probe or the introduction of any other aseptic instrument. When the wound has been caused by gunshot missiles, it is extremely important that knowledge be gained as to whether the bullet penetrated the abdominal cavity or not, and the diagnosis of this is sometimes very difficult. If some part of the intestines, the omentum or the contents of the stomach, intestines or bladder escape through the wound, evidence that it is a penetrating one is sufficient, but these do not always occur. Escape of hydrogen gas through the wound after having been forced

into the intestines, would be conclusive proof that the wound was not only a penetrating one, but that some part of the intestines were also perforated. Hemorrhage which is contained in the abdominal cavity gives rise to well recognized signs of fluid in the peritoneal cavity. Blood may be passed per rectum, but usually not early enough to be of any diagnostic value. Signs and symptoms following injuries to the different organs are described under Complications.

COMPLICATIONS: *The Diaphragm* may be punctured as a complication of any penetrating wound and occasionally the jagged end of a fractured rib produces the same result. In such cases, if the opening is large enough, some of the contents of the abdominal cavity usually pass into the thorax, producing a hernia. Cases of puncture of the diaphragm are extremely difficult to diagnose and the condition is seldom known until an abdominal section is performed or a postmortem is made.

Stomach Injuries as the result of gunshot and stab wounds are not uncommon and often complicate penetrating wounds of the abdomen. When the stomach has been perforated, vomiting of blood occurs and sometimes the contents of the stomach pass through the wound in the abdominal wall. Perforations of the stomach are diagnosed in obscure cases by the use of hydrogen gas.

Wounds of the Liver and Gall-Bladder which occur as the result of a punctured wound of the abdominal wall are followed by profuse hemorrhage and escape of bile, and unless an abdominal operation is performed at once and the wound closed by deep sutures, death generally terminates the case in a short time.

The Pancreas is sometimes injured by bullets or stab wounds, but the diagnosis is seldom made until after death ensues or an abdominal operation has been performed for the treatment of other punctures.

Punctured Wounds of the Spleen are followed by excessive hemorrhage, and as in the case of the liver and pancreas, the diagnosis is not often made unless the abdominal cavity is opened for some reason, when the bleeding may be stopped or the entire spleen removed if necessary.

Intestinal Perforations complicating perforating wounds of the abdominal wall are extremely difficult to diagnose, unless some of the contents of the intestines are discharged through the wound or a fecal odor can be determined at the point of perforation.

Sometimes the abdominal cavity becomes more or less filled with gas, which escapes from a perforation in the intestines, when physical signs indicating this condition will be apparent. Other signs and symptoms such as pain, tenderness, bleeding, shock, condition of the pulse, etc., when present, are not of sufficient diagnostic import to determine a puncture of the intestines, as all of these may occur from a simple punctured wound of the abdominal wall.

Penetrating Wounds of the Kidneys may involve the peritoneum and in some cases the injury wounds the posterior part of the kidney, when the peritoneal cavity is not opened. The passage of urine through the wound would serve to indicate an injury to the kidney. Blood is sometimes passed in the urine, although this is not constant. There is pain in the bladder which is transmitted to the groin, testicle or thigh. If the wound is extra peritoneal, the prognosis is much better than if the peritoneal cavity itself has been opened. Abscesses sometimes complicate this class of injuries, and when present greatly prolong disability.

Bladder Wounds are common when a deep puncture of the abdominal wall over the region of this organ exists. The diagnosis is easily made by the passage of urine through the wound or in cases where the contents of the bladder are emptied into the abdominal cavity, absence of urine in the bladder is sufficient to make the diagnosis of a puncture, or the use of the cystoscope will make the condition clear. The prognosis of these injuries is determined according to the location of the puncture in the walls of the bladder; if interperitoneal, general peritonitis follows and death soon ends the case. In extraperitoneal injuries, the urine infiltrates into the connective tissue of the abdomen, perineum, scrotum and often extends into the thighs; producing sloughing and greatly prolonging disability; subperitoneal punctures may or may not produce peritonitis.

TOTAL DISABILITY following punctured wounds of the abdominal wall which do not penetrate into the peritoneal cavity require from 1 to 2 weeks for all classes of risks, unless there is a large amount of laceration complicating the puncture, when total disability of from 2 to 3 weeks may be necessary. If the punctured wound becomes a penetrating one and infection of the peritoneal cavity ensues,—to be followed by peritonitis,—total disability is generally ended by death of the individual within 7 days. If the wound injures some of the contents of the abdominal

cavity and these are repaired at once or before general peritonitis develops, total disability usually lasts from 4 to 6 or 8 weeks, unless a complication such as an abscess of the peritoneal cavity or some other cause prolongs disability. Injuries to the bladder that are not fatal and which result in extravasation of urine into the connective tissues surrounding these parts, prolong disability for an uncertain time; usually, however, this complication is followed by recovery in 4 to 8 weeks, depending on the amount of sloughing which occurs. Perforating wounds which are complicated with peritonitis and followed by recovery are prolonged by this complication 2 to 3 weeks.

PARTIAL DISABILITY of 1 to 2 weeks may be necessary in preferred risks when the wound involves the abdominal wall only. Ordinary risks are not entitled to any partial disability following this character of wounds. If the injury is a penetrating wound and some of the organs of the abdominal cavity are injured, partial disability is allowable to that class of risks who are able to follow part of the occupation during the time required for complete recovery and this time may last from 3 to 8 weeks; rarely longer.

EFFECTS: Punctured wounds of the abdominal wall only leave no bad effects; a scar, however, results, and is permanent. If the wound has involved any of the contents of the abdomen, an individual would not be insurable for any kind of insurance until at least one to two years had passed after complete recovery from the accident, and even then it is questionable if an insurance company would be justified in accepting persons who have suffered from punctured wounds of any of the important organs of this cavity. Such individuals who recover usually have the contents of the abdominal cavity strongly bound together by adhesions and more or less impairment of health results.

HERNIA

INFORMATION: When the term hernia or rupture is used alone, it generally means a protrusion of some of the contents of the abdominal cavity through an uncompleted opening in the abdominal wall which is covered by skin. Such a condition is more common in the male and may occur at any time during life. It is due to any condition which forces some of the contents of the abdominal cavity through a weakened spot in the anterior wall.

Muscular efforts which are carried to excess, relaxation of the abdominal muscles, severe contusions, a sudden jerk of the body and pressure of the abdominal contents within and pressure on the abdominal walls are some of the causes which produce this condition. Da Costa says "a hernial sac may exist for years and remain empty. When bowel or omentum enters it from some strain or effort, the parts were long prepared to receive the extruded mass. This extrusion may occur gradually; it may occur suddenly. If it occurs suddenly, the sufferer believes that his hernia was formed then and there, but, as a matter of fact, the extrusion of bowel or omentum and its entrance into the sac are but the last of a long series of antecedent and preparatory changes. Finally, a hernia appears, and usually does so during effort. In rare cases, traumatism may cause a hernia immediately, no sac

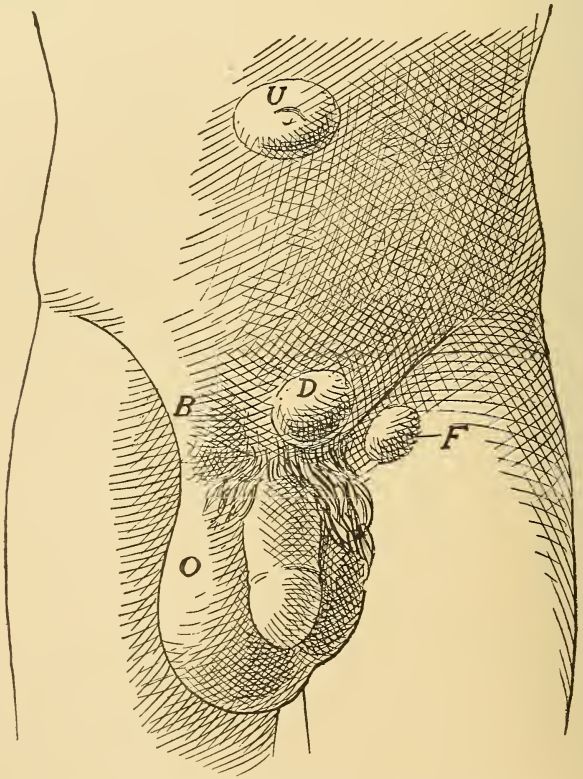


FIG. 32.—LOCATION OF VARIOUS FORMS OF ABDOMINAL HERNIAE (DIAGRAMMATIC.) (Eisendrath).

U, Umbilical hernia; D, direct inguinal hernia; B, indirect incomplete inguinal hernia; O, complete or scrotal inguinal hernia; F, femoral hernia.

existing before the accident." Accident policies usually cover disability from a rupture for a limited period only, this is because an individual who becomes ruptured might refuse to wear a truss and claim disability for an indefinite period. Any one suffering from a rupture should be totally disabled no longer than the time necessary for securing a well fitting truss and that should not be more than two or three days at the longest in any section of the United States. Hernia which becomes strangulated at the time it occurs and necessitates an operation, is covered by an accident policy and the company would be liable for the time required for recovery. When an individual has been suffering from a rupture for some time and voluntarily undergoes an operation for its cure, he is not entitled to indemnity under an accident or disability policy. If the operation is performed on account of the hernia becoming strangulated, then a disability policy would cover the loss of time.

SIGNS AND SYMPTOMS: Immediately following a tear in the abdominal wall, there is swelling with a sickening feeling

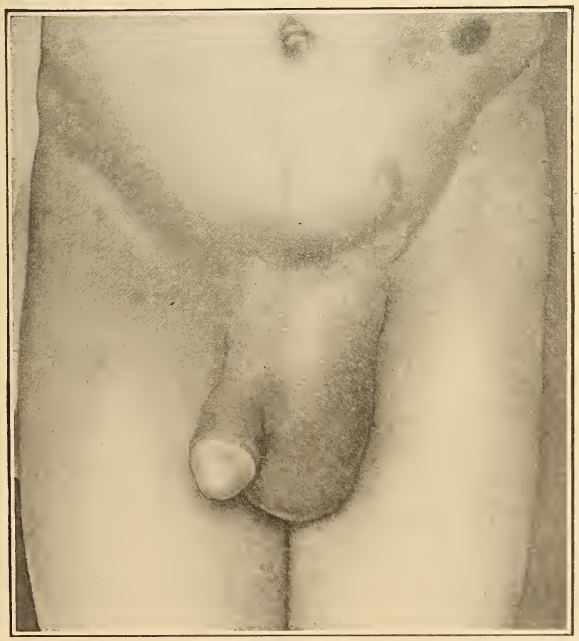


Fig. 33.—Oblique inguinal hernia or rupture of left side. (Berg).

and a desire to support the part injured; vomiting sometimes occurs. At the opening in the abdominal wall is noticed a small

soft tumor which disappears on pressure and also when the individual is in a recumbent position; on coughing an impulse is felt at the opening and the tumor, if not supported, is increased in size.

DIFFERENTIAL DIAGNOSIS: When an inguinal hernia exists, several forms of swelling may be claimed as hernias; in addition an old hernia may be said to be a recent one and the result of an accident. A rupture of some standing, unless supported

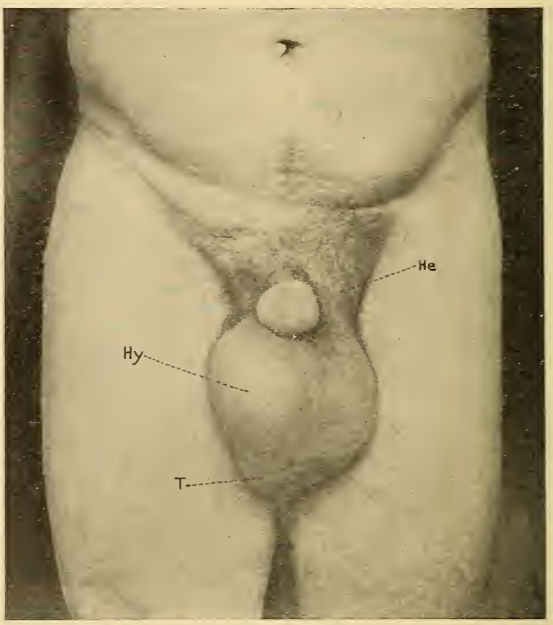


Fig. 34.—Hernia and hydrocele in the same patient. Hy, hydrocele sac, pushing the testis (T) downward and behind it; He, left indirect complete or scrotal hernia. (Eisendrath).

by a truss from the beginning, shows a considerable opening in the abdominal wall, and sometimes when the omentum forms the hernia, adhesions bind the protrusion in place and it is not reducible, thus serving to show that it is of long standing. An individual who has suffered from a hernia for some time shows on his body the marks of a truss; these marks being seen behind where the pads rest and also in front over the rupture; besides there is a thickening of the skin under the pads which results from pressure, while a dark red discoloration of the skin generally exists at the same place. If these are not apparent on account of

the truss not having been worn very long, the hair on the pubis is worn off by the strap which connects together the two anterior ends of the truss.

Hydrocele is often mistaken for a rupture. This swelling is pyriform in shape and commences at the bottom of the scrotum, it is semi-fluctuating, transmits no impulse on coughing, is dull on percussion, and when a light is held behind the tumor, it is translucent and shows the testicle to be behind and at the lower part of the swelling. There may be scars from one or more punctures in old-standing cases of hydrocele which are claimed as due to accidents, if these marks are found, it is evidence that a hydrocele has existed, but that does not preclude a hernia also existing.

Hematocele or a collection of blood in the scrotum appears suddenly as the result of an injury to this part of the body. Examination shows no impulse on coughing, and if felt between the fingers the impression of holding a mass of dough is given. When a light is used, the swelling is opaque; in addition to these signs and symptoms there is a clear history of an accident with resulting discoloration of the scrotum and in many cases abrasions. Such injuries are usually complicated with other injuries of the body which would serve to prove that the condition is a recent one and accidental in origin.

Varicocele should never be taken for a rupture, although this condition is diagnosed as such. Pressure reduces the enlarged and distended veins which readily fill up again when it is relieved or placed over the inguinal ring, thus showing that the condition is not a hernia.

COMPLICATIONS: *A Strangulated Hernia* is liable to occur when a hernia is sustained, especially if there is a large protrusion of the intestines at the time the hernia is produced; such a condition is sometimes reducible without an operation, and if not, this is necessary at once for the preservation of life.

TOTAL DISABILITY following a simple, uncomplicated hernia should not last any longer than the time required for the individual to secure a truss, because as soon as a truss is put on, disability ends, and from 2 to 5 days are ample in such cases. When a truss is first adjusted it causes excoriation of the skin under the pads, some pain and discomfort, but this is not sufficient to produce disability of any kind. If a hernia becomes strangulated at the time it occurs and is reduced without an operation, total disability generally lasts from 7 to 10 days; if an operation

is required, indemnity of 4 to 6 weeks is payable to preferred risks. Ordinary cases sometimes require 1 to 3 weeks longer than the above time following an operation for a strangulated hernia.

PARTIAL DISABILITY is not often allowable to any class of risks following a hernia which may be received accidentally. Sometimes total disability is prolonged for various reasons and the individual becomes weakened; in such cases, partial disability in preferred risks of from 1 to 3 weeks is necessary. Ordinary risks do not resume their labor until capable of doing a full day's work, consequently they are not entitled to any of this disability.

EFFECTS: Individuals who have suffered from a hernia and wear a well fitting truss are insurable for any kind of insurance from one to two months after the injury occurs, provided all policies contain a waiver eliminating disability or death, if a truss is not worn constantly while in the upright position. If an operation for a strangulated hernia is necessary, the claimant is not insurable until three to six months after complete recovery, and even at that time it would be good underwriting to consider each case by itself.

SUPPURATION OF THE INGUINAL GLANDS

INFORMATION: The most frequent cause of abscess of the glands of the groin is venereal disease, although an accident is usually claimed to have produced the suppuration. Any point of infection which is in the area drained by these glands may produce a suppuration of them. Some individuals suffering from an abscess of these glands claim that the suppuration is the result of a blow or due to straining in an attempt to lift a heavy object. Prominent genito-urinary specialists see one or two cases of suppuration of the glands of the groin as the result of an accident in a life time; it can therefore be seen how extremely rare is this condition following an accident. An individual is entitled to indemnity under an accident or disability policy, when a suppuration of the inguinal glands occurs and is accidental in origin. Some insurance companies issue disability policies which pay indemnity for loss of time without regard to the cause, and even though an abscess of the glands is venereal in origin, the company is liable under such a policy. Very few men, however, claim indemnity for disability when it results from disease of the genital organs.

On account of abscess of the glands of the groin being almost invariably caused by venereal infection, all claims alleging disability as due to this cause should be closely investigated, and if this is done properly, the company is almost sure to obtain evidence that the suppuration is due to disease and is not accidental in origin.

SIGNS AND SYMPTOMS: Individuals suffering from infection of these glands allege a history of an accident and usually state that the glands have been injured in lifting; they claim pain, tenderness and inability to work on account of the swelling that appears and which in some cases goes on to suppuration. Increased pulse rate and slight elevation of temperature are present in suppuration of these glands.

DIFFERENTIAL DIAGNOSIS is easily made in such conditions. If the suppuration is actually due to an accident, there is evidence of a blow and discoloration which is characteristic of an extravasation of blood under the skin and not the red, purplish discoloration which accompanies an abscess. If the abscess is the result of venereal disease, there is evidence of such existing. If no discharge from the penis exists, a specimen of urine will contain pus and shreds of mucus which prove that a urethritis is present.

Syphilis can be existing at the time and cause an enlargement of these glands, and this may be accompanied by a suppuration which is not due to the syphilitic infection. When the induration is caused by syphilis, it always attends or follows a chancre. The glands that are involved are freely movable and no inflammatory symptoms are present, the skin being normal and not adherent to them. This condition is painless and rarely suppurates unless it is caused by a mixed infection.

COMPLICATIONS: *Venereal Disease* of some kind almost invariably complicates an abscess of the glands of the groin and can be diagnosed if the proper methods are employed.

TOTAL DISABILITY from suppurating glands of the groin in preferred risks when the cause is accidental in origin, requires from 1 to 2 weeks. Ordinary risks generally demand from 2 to 3 weeks of this disability. All risks suffering from an abscess of the glands of the groin when the cause is a venereal infection, require from 1 to 3 weeks of total disability.

PARTIAL DISABILITY of 1 to 2 weeks is payable to preferred risks suffering from this condition when caused by an accident Partial indemnity for total disability under a health policy

in the same class of risks when the abscess is due to venereal disease may require from 2 to 4 weeks. Ordinary risks are not entitled to any partial disability.

EFFECTS: After complete recovery a scar remains, and if the disability has been due to an accident, the individual is insurable for any kind of a policy from three to four months after complete recovery. An insurance company would hardly issue an accident or health policy to any person who had made a claim for disability when the cause was a venereal disease; the reason of this being due to the increased moral hazard which exists in these cases. Life insurance can be written from three to six months after an infection due to gonococci has been cured, but if syphilis has existed, insurance of every kind is denied the individual in the majority of cases. When a well authentic history of treatment for two to three years with absence of signs and symptoms for three to five years after the termination of the treatment is obtained, insurance of all kinds can usually be granted.

PART III

INJURIES OF THE BACK

ABRASIONS AND CONTUSIONS

INFORMATION: When an injury of any character is sustained to the back and is described as involving this part of the body, it usually has reference to that part which extends from the base of the neck to the rim of the pelvis. Abrasions of the back are rarely seen except in conjunction with other and more serious injuries involving some other part of the body, when the period of disability is controlled by the character of the more severe injury. Contusions of the back commonly occur and result from any blow which may be applied directly to any part of the back or by indirect force, such as falls in which the body alights on the feet, buttocks, shoulders or sides. These contusions are mostly complicated with sprains involving some part of the vertebral column.

SIGNS AND SYMPTOMS: Abrasions of the back produce the same symptoms in this locality as seen in other parts of the

body; namely, an abraded surface followed by bleeding, scabbing and sometimes suppuration with slight pain and tenderness. Contusions produce slight swelling, but extensive discoloration, with pain, tenderness and inability to bend the body forward or backward or to turn from side to side without causing much pain. If the blow is in the region overlying the kidneys and these organs are injured, there is severe, localized pain followed by urinary symptoms, such as a constant desire to micturate with the passage of small quantities of urine and in some cases bloody urine or pure blood, according to the severity of the injury. Bleeding from the kidneys may persist from one to three or four days and gradually disappear as the organs recover.

DIFFERENTIAL DIAGNOSIS: *Tumors and Swelling* of the back which may have been present for some time and caused by other conditions may be claimed as the result of a contusion. Discoloration which is characteristic of a contusion is absent when the swelling is due to tumors or other causes, unless it has been intentionally produced by repeated slight blows over the swelling or by the subcutaneous injection of tincture of iodine. Pain and tenderness are not usual in tumors which have been existing for some time and although claimed by a malingerer, the absence of such could be proved by making pressure over the tumor when the attention of the individual is on another subject. Increase in the rate of the pulse almost invariably occurs when the pressure is made over a painful area, and this would not be present when pressure is made over a tumor mass. A beginning abscess seen in the early stages may be said to be due to a blow; in such cases there is swelling and signs of inflammation, such as redness, increased temperature over the part, with pain and tenderness which is more acute than if following a contusion, but the characteristic discoloration of a contusion is absent.

Muscular Rheumatism is one of the most frequent causes of disability which is said to be due to a contusion or a sprain of the back, and is extremely hard to diagnose or prove that the condition is due to disease, rather than the result of an injury as claimed. This disease involves the voluntary muscles and is usually bilateral, coming on after exposure to cold or dampness or following a previous attack. The onset of the disease is sudden, with stiffness in the muscles involved, severe pain, tenderness and much difficulty on movement. Spasm of the affected muscles may occur which would not be seen following a contusion. The

duration of this condition is about one week, although it may be prolonged when the weather is unfavorable.

COMPLICATIONS: *Sprains* involving some of the joints of the vertebral column usually complicate a severe contusion of the back, but such is not the case when slight abrasions or contusions are suffered. Injury of the kidneys may follow severe blows to the lower part of the back or side, when disability is generally prolonged.

TOTAL DISABILITY following simple abrasions of the back which are uncomplicated by any other injury should not be allowed to any class of risks. Preferred risks are entitled to 1 to 2 weeks of this disability when a severe contusion has been sustained and no complications are present. Ordinary risks usually require from 1 to 3 weeks of total disability following severe contusions of this part of the body. If any injury to the kidneys occurs at the time, total disability in all classes of risks usually lasts from 2 to 4 weeks.

PARTIAL DISABILITY of 1 to 2 weeks may sometimes be necessary when the period of total disability has been short. Ordinary risks are not often entitled to this form of disability.

EFFECTS: Individuals who have suffered from a severe contusion of the back are insurable for any kind of a policy two to three months after the date of the accident,—provided no complications have arisen. If the kidneys have been injured and disability has been prolonged thereby, an insurance company would hardly consider such a person for any kind of insurance until six to twelve months have elapsed, and even then not until a urinary examination has been made by a competent physician.

INCISIONS AND LACERATIONS OF THE BACK

INFORMATION: Incised or lacerated wounds involving the posterior surface of the body between the base of the neck and the buttocks result from contact with any substance which will lacerate the skin and underlying tissue more or less extensively. Such wounds cause short periods of disability and leave no permanent impairment, unless the erector spinæ muscle is badly cut or torn or the injury involves some of the ligaments binding the segments of the vertebral column together.

SIGNS AND SYMPTOMS are the same as seen in such injuries to any portion of the body; pain, tenderness, swelling, bleed-

ing, separation of the wound edges and some impairment of motion may be noticed.

COMPLICATIONS: *Incised or Lacerated Wounds* which are sufficiently deep, may enter the peritoneal cavity and result in peritonitis; usually, however, this class of injury is complicated only by infection which prolongs disability.

TOTAL DISABILITY in superficial incised or lacerated wounds is not deserved by any class of risks unless a number of cuts are present, when 7 to 10 days may sometimes be necessary. Deep incised wounds which require six or more sutures, or lacerated ones which cover a considerable area, demand from 1 to 2 weeks of total disability. If these wounds become infected, this form of disability is usually prolonged about 1 week.

PARTIAL DISABILITY is not often necessary following either incised or lacerated wounds to this part of the body. Preferred risks sometimes require from 3 to 7 days of this disability following a short period of total disability. Ordinary risks are not entitled to any partial disability.

EFFECTS: A resulting scar, but seldom any deformity or disability, unless the incision or laceration has been very deep or involved a large surface, when the extensive scar which results may cause some inconvenience; but rarely disability. After recovery is complete, individuals are insurable for any form of policy.

PUNCTURED WOUNDS OF THE BACK

INFORMATION: Punctured wounds of the back result from the same causes as do punctured wounds of the chest or abdominal wall and are divided into non-penetrating and penetrating. Non-penetrating wounds which involve only the posterior surface of the chest or abdominal cavities produce total disability for the length of time required for complete healing of the wound, while penetrating ones may enter the chest or abdominal cavities and injure some of the contents. For description of punctured wounds which injure any of the organs of the chest or abdominal cavities, see Punctured Wounds of the Chest or Abdomen.

SIGNS AND SYMPTOMS: Shock almost invariably follows a punctured wound which does not penetrate into either one of the cavities, the degree of which may be slight or severe. There is localized pain and tenderness, bleeding from the wound and

later if infection occurs, swelling and inflammation surrounding the puncture, with a discharge of pus.

COMPLICATIONS: *Infection* is usual in punctured wounds involving any part of the body, and this is especially true if the puncture is deep and made by an instrument of small calibre, as it is almost impossible to thoroughly cleanse such a wound and prevent infection. Marked elevation of temperature results when the infection is severe.

Erysipelas or Tetanus is liable to occur, and especially the latter when the puncture has been made by missiles from firearms, and if either one of these complications ensue, the usual signs and symptoms peculiar to the disease are evident.

The Vertebræ of the spinal column may be fractured by punctured wounds and pressure on the cord supervene, when paralysis below the point of injury results and in many cases infection and death.

TOTAL DISABILITY following punctured wounds depends on whether the wound is non-penetrating or penetrating; if the latter the length of time disability ensues is described under Punctured Wounds of the Chest or Abdomen. Total disability in uncomplicated non-penetrating wounds of the back, in preferred risks, lasts 1 to 2 weeks; if infection occurs, total disability is prolonged 7 to 10 days in this class of risks. Ordinary risks are usually entitled to 2 to 3 weeks of total disability when the puncture has been deep and is followed by infection. Should erysipelas or tetanus complicate a punctured wound, total disability is prolonged according to the time described under these diseases.

PARTIAL DISABILITY is seldom necessary in any class of risks following a punctured wound of the back.

EFFECTS: Punctured wounds which do not penetrate either one of the cavities of the trunk, leave no permanent deformity, unless injury to the spinal cord has occurred, when insurance of all kinds would be denied any one suffering from the result of such an accident. If the cord has not been injured, an individual is insurable for any kind of a policy from one to two months after complete recovery.

BURNS AND SCALDS OF THE BACK

INFORMATION: Burns and scalds of the back may be inflicted when that part of the body is bare of clothing or covered

by it. When the back is uncovered by any article of apparel, burns and scalds usually occur to males who work where hot metal and steam are constantly employed. Burns and scalds to the back when it is covered by clothing also take place and result from hot metal, hot water, steam, acids or alkalies and are generally more severe on account of the cause of the burns or scalds being confined under the clothing. These injuries are usually superficial, but extensive, and involve a more or less greater area

Fig. 35.—Burns of the back. (Keen).

of this part of the body, but do not often extend deep enough to result in a punctured wound of the chest or abdomen from behind.

SIGNS AND SYMPTOMS depend on the degree of severity of the burn or scald. Usually, however, shock is the most pronounced symptom, manifesting itself by subnormal temperature and marked weakness and prostration. In addition there is pain, tenderness and evidence of the burn or scald or the action of acids or alkalies. Sometimes when hot metal has been confined, carbonation results. When the scald is due to steam or hot water, it may be superficial and only produce blisters, while again it may

be severe enough to cause a total loss of the tissues of the parts involved.

COMPLICATIONS: *Infection* almost invariably follows a burn or scald involving a considerable area of the back and prolongs the period of disability.

Necrosis of the processes of the vertebræ and also the posterior surface of the ribs, may sometimes result on account of severe and deep burns involving this part of the body.

Neuritis of the intercostal nerves may complicate severe burns or scalds involving the back, especially if the burn has been sufficiently deep to affect the nerves at the point of exit from the spinal column.

Fractures of the processes of the vertebræ, together with fractures of the ribs or the scapula, may result when a severe burn or scald is complicated with a fall or a severe blow from some heavy object which may strike the body at the same time that the burn or scald occurs.

SEQUELAE: *Skin Grafting* is almost invariably required when burns or scalds of the back exceed an area of four to five inches in diameter. When such an operation is necessary, the period of total disability is prolonged from two to three weeks for each operation.

Scars which are more or less marked and which result in various degrees of contraction always follow severe burns of the back. If the scald has been very deep and some of the muscular tissue has been destroyed, the contraction from the resulting scar may limit the movement.

Deformity and permanent injury may follow severe and deep burns involving the back, and this is especially true if a large area has been destroyed and the burn or scald has been deep and involved the muscular tissues. If a fracture has existed or necrosis of the bone resulted from the burn or scald, the degree of deformity may be more pronounced.

TOTAL DISABILITY generally follows in all classes of risks when the burn or scald if at all deep has involved an area exceeding three or four inches in diameter. When a less amount of area has been burnt or scalded, total disability does not even exist in preferred risks. Ordinary risks usually require from 1 to 2 weeks of disability in burns which are of this size and moderately deep. Larger burns require from 2 to 3 weeks in preferred risks and from 3 to 5 weeks in ordinary classes. Severe

burns or scalds of the back in which a considerable superficial area has been involved, together with extension to the deeper tissues usually demand from 4 to 6 or 10 weeks in all classes of risks,—this time depending on the location of the injury, the area involved and the severity, together with the depth of the burn or scald. Skin grafting is generally necessary when the burn or scald involves an area larger than four to five inches in diameter. Disability in such cases is usually prolonged from 2 to 3 weeks for each operation.

PARTIAL DISABILITY when allowed by the policy generally requires from 2 to 4 or 6 weeks and sometimes longer,—this period of disability depending on the length of total disability which preceded it, the exact duties of the occupation, the area and degree of severity of the burn or scald and the subsequent history. When a large part of the back has been burnt or scalded by hot metal, water or steam which was confined under the clothing, the period of partial disability may sometimes run the limit of the policy.

EFFECTS: Burns and scalds of the back of any severity always leave scars which are first red and later become bleached and white. If the burn or scald has been deep, these scars contract in various directions, thus producing an ugly looking mass of scar tissue. Sometimes the scar is so situated that the deformity which results from it causes no impairment of motion or any visible deformity. Individuals who have suffered from severe burns or scalds of the back which have involved a considerable area and which was followed by healing, are insurable for any kind of a policy as soon as recovery is complete, and it could be decided that permanent deformity would not result. If the deformity is sufficiently great to cause impairment of motion or prevent the individual from protecting himself in a case of emergency, an insurance company would hardly issue an accident or life policy on such a person.

SPRAINS OF THE BACK

INFORMATION: Claims for disability alleging the cause as due to a sprain of the back are frequently received by insurance companies. Industrial accident and health insurance companies on account of these claims being so numerous usually have a clause in their policies stating that claims for disability resulting

from a sprain of the back will not be allowed for more than four weeks of total disability. Sprains of the back are due to any violent twist or untoward movement involving this part of the body which tears or lacerates the muscular tissue of the back or any of the ligaments in connection with the vertebral column. Sprains which cause short periods of disability are usually due to a tear of the muscles or fascia of the back, while severe sprains which result in prolonged periods of disability are almost invariably the result of a tear of the ligaments holding together the vertebræ of the spinal column. Acts of overexertion in which the individual attempts to lift a heavy object and persists in trying to lift such a weight until something gives way in the back or until a tear of the muscles, fasciæ or ligaments occur, are not covered by an accident policy, for the reason that no accident has occurred, the individual in such cases producing the disability by an act of overexertion, and an insurance company will not acknowledge claims for disability when it is the result of such unwarranted acts.

SIGNS AND SYMPTOMS following a sprain of the back which occur more often in the lumbar region, are first pain which is usually localized, later tenderness is present and sometimes swelling. Discoloration is rare in sprains of the back unless the tear of the muscles or ligaments has been marked. Certain movements,—and especially when bending forward,—generally increases the pain in sprain of the back when the ligaments of the spinal column have been torn. If the injury has resulted in a tear of some of the muscles of the back, there may be inability to resume the upright position after bending forward, and when lying in bed it is oftentimes impossible for the legs to be moved. This apparent loss of power, together with pain and difficulty in securing movement of the bowels or the evacuation of the contents of the bladder, is usually not due to paralysis, but is caused by an effort on the part of the individual to save himself pain which results on the slightest movement from severe sprains involving the vertebral column.

DIFFERENTIAL DIAGNOSIS: *Lumbago* must always be differentiated from a sprain of the back. This disease frequently comes on suddenly when the individual is in a stooping position. When it is present, an inflammatory condition of the muscles exists with severe pain on the slightest movement in any direction, tenderness over the inflamed muscle which is usually on one

side, although sometimes both sides are affected, stiffness and rigidity of the muscle involved and generally a history of a previous attack or a history of exposure which might result in this disease. Disability from lumbago does not often last more than from one to two weeks, while a sprain of any degree of severity is never recovered from in this length of time.

Dislocations of the cervical vertebræ are sometimes supposed to exist when a sprain has occurred to this part of the body,—this being due to the fact that the individual holds the head in a fixed position and usually to one side. When this position is assumed, the transverse processes are more prominent on one side than on the other, thus giving rise to the assumption that a dislocation of these processes has occurred.

COMPLICATIONS: *Concussion of the Spine* not infrequently complicates a sprain of the back, but this subject is considered under a special article,—Concussion of the Spine.

Inflammation of the intervertebral disks sometimes follows a severe sprain of the back in which some of the ligaments of the spinal column are torn. When this condition exists there is inability to stand on the feet, a slight blow on the top of the head or soles of the feet causes severe pain at the point of inflammation, there is usually some swelling and extreme tenderness with pain at the point of injury which persists for a considerable period of time.

Fractures and Dislocations of the vertebral column may complicate a severe sprain of the back, but in this case the complication is more serious than a sprain, and information concerning this is described under Fractures and Dislocations of the Spine.

SEQUELAE: *Caries of the Vertebræ* is said to follow severe sprains of the back in which the ligaments of the spinal column have been torn and inflammation of the intervertebral disks existed. In such cases this condition would not manifest itself until some weeks or months after the date of the original injury.

Softening of the Spinal Column on account of localized inflammation which is due to a severe sprain of the back involving some of the ligaments or intervertebral disks may result from a severe sprain in this part of the body. In such cases various signs and symptoms, such as a change in the reflexes in the lower extremity, incoordination of the movements of the feet and legs, with sometimes motor and sensory paralysis follow.

TOTAL DISABILITY in preferred risks suffering from

slight sprains of the back involving the muscular tissues usually does not last longer than from 1 to 2 weeks. When the injury involves the ligaments connecting the spinal column and is uncomplicated, total disability in this class of risks may last from 2 to 4 weeks and sometimes longer, when complications supervene. Ordinary risks are generally totally disabled from 2 to 4 weeks when a severe sprain of the muscles of the back occurs, and from 4 to 6 or 8 weeks when the injury has involved the ligaments connecting the spinal column.

PARTIAL DISABILITY is seldom payable to ordinary risks following an injury of this kind, for the reason that they are not able to assume any part of their occupation until all of it can be taken up. Preferred risks, however, demand from 1 to 3 or 6 weeks of this form of disability,—this time depending on the character of the injury, the location, its severity, the treatment and the exact duties of the occupation.

EFFECTS: Individuals having suffered from a sprain of the back which involved the muscular tissues only are insurable for all kinds of insurance as soon as recovery takes place. When the injury has been more severe and some of the ligaments of the spinal column have been torn,—and especially if any complications such as so-called concussion of the spinal cord or inflammation of the intervertebral disks follow the injury,—such persons are usually uninsurable for any kind of insurance until two to four months after the termination of disability and it is known that no after effects are present.

FRACTURES AND DISLOCATIONS OF THE VERTEBRAE

INFORMATION: Fractures and dislocations of the bones forming the vertebral column usually occur together, it being said that a dislocation existing between the bones of the spinal column without a fracture is exceedingly rare; so also is it claimed that a fracture without a dislocation seldom exists, although fractures involving some of the processes and laminæ may be present without being complicated with a dislocation. Fractures and dislocations of the vertebral column are either the result of direct or indirect force. Direct force when the blow is applied directly to some part of the spinal column and indirect when the body is twisted or falls from a height and lands on the

head or feet. When a violent bending backward occurs the processes of the vertebræ are usually fractured, while the intervertebral cartilages are badly torn. A dislocation of the bodies of the vertebræ is caused by a twisting or bending forward or backwards. Fractures and dislocations of the spine mostly involve the cervical and dorsal regions, the atlas and axis being more frequently fractured, and when either of these bones is involved death is instantaneous. If a slight dislocation of any of the bones of the spinal column occurs and the cord is slightly injured, death generally follows at a later date on account of the succeeding disease of the cord.

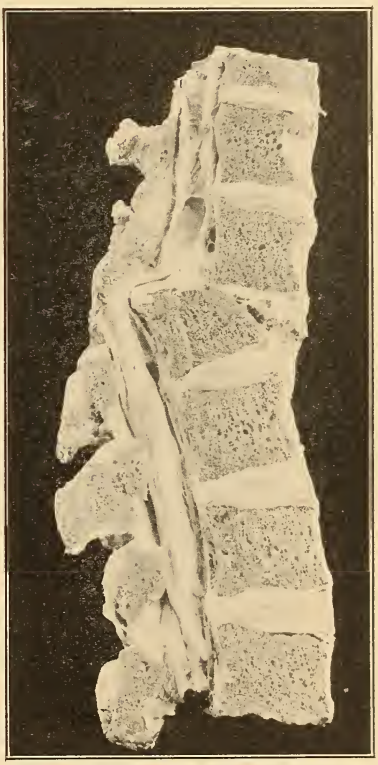


Fig. 36.—Fracture-dislocation of spine, showing crushing of the cord. (Eisendrath).

SIGNS AND SYMPTOMS depend on the mode of occurrence of the accident, the location of the injury and its severity, whether the cord is injured or not. Displacement following a fracture or dislocation of the bones of the spinal column is seldom marked, but when a fracture of the spines of the vertebræ exists, some irregularity is present and sometimes crepitus can be elicited. Swelling is apparent at the point of injury, and this is followed by discoloration. Fractures and dislocations of the vertebræ produce pain which is increased by movement, tenderness at the point of injury and symptoms referable to the site of the cord-injury. If the spinal cord is injured above the third cervical vertebræ death is instantaneous on account of the phrenic nerve being involved and respiratory movements prohibited at once. If injury occurs between the third and sixth cervical vertebræ, paralysis according to the degree of cord-injury affects the muscles of the shoulder and other parts of the body with anesthesia below the points of injury. A fracture and dislocation

of the vertebræ of the dorsal region produces paralysis below the point of injury and when the injury is in the upper dorsal region, the hemorrhage which follows may extend upward and involve the phrenic nerve, when death takes place at once. If the fracture and dislocation occurs to the vertebræ in the lumbar region, extreme pain in the legs is complained of, with paralysis of the lower extremities, the bladder and rectum. Fractures involving the spinal column should always be subject to an x-ray examination if possible, for the purpose of ascertaining the extent of fracture and involvement of the cord.

COMPLICATIONS: *Fractures and Dislocations of the Sternum* often exist when the vertebræ have been injured by extreme flexion or hyperextension. If this complication is present, the breathing is interfered with and pain is present, together with deformity of the breast-bone.

Fractures and Dislocations of the Ribs may be present when a severe twisting or forcible bending backwards or forwards has resulted in a fracture and dislocation of the vertebræ. Such a complication does not prolong disability should the spinal injury not be sufficient to cause death.

Bed-Sores almost invariably supervene when a fracture of the spinal column exists and some injury to the cord has occurred, this being due to an altered nerve supply to the parts, pressure and the constant bathing of certain portions of the body by discharges from the bladder and bowels

Chronic Cystitis usually follows when a fracture of the spinal column takes place, with a concomitant injury to the cord. This cystitis is supposed to be due to the injury and also to the entrance of pathologic germs into the bladder by the use of a catheter which becomes necessary in such cases.

Pyelonephritis follows an infection of the bladder if the individual lives sufficiently long for the inflammation to travel up the ureters and involve the pelvis of the kidneys.

TOTAL DISABILITY is extremely uncertain in cases suffering from a fracture and dislocation of the bones of the vertebral column and death almost invariably follows these fractures, the location of the fracture oftentimes determining when the period of disability will be terminated by death. Total disability never exists when the fracture and dislocation involve the first and second vertebræ, death occurring instantly. When any of the other cervical vertebræ are involved, death may not take place

for twenty-four hours or perhaps 1 to 2 weeks. If the dorsal and lumbar vertebræ are injured, together with the spinal cord, the individual may be totally disabled and confined on his back on a water-bed for weeks or months and sometimes years before death finally takes place.

PARTIAL DISABILITY is almost never present in cases of a fracture and dislocation of the vertebræ together with an injury to the cord, as an individual having suffered from such a condition rarely returns to work, and if so, the occupation is not resumed until practically all of it can be assumed.

EFFECTS: Individuals with a history of having suffered from a fracture and dislocation of any part of the spinal column with or without an injury to the cord are uninsurable for any kind of a policy.

CONCUSSION OF THE SPINAL CORD

INFORMATION: Concussion of the spinal cord, according to some authors, is not a pathological condition, being merely a name given to a train of symptoms which develop after an injury occurs to the back and when a corporation is involved. These injuries are most frequently known under the term of "railway spine," and a number of vague signs and symptoms are claimed to exist when a corporation is liable or supposed to be liable for the injuries inflicted. This condition is frequently assumed by malingerers for the purpose of securing money from some one, and these persons who become malingerers from trivial accidents involving the back or spinal column are most often women who have been more frightened than hurt in an accident on a street car, railway train or in some other manner which may result in liability for damages on the part of some one. The disability which ensues from these injuries and which is often due to mental impressions has been known to instantly subside in a court room when a verdict in favor of the plaintiff has been rendered by a jury. In other cases when a favorable verdict has been received, recovery takes place within a very short time. A true concussion of the spinal cord, however, may exist from an injury such as a severe twist or blow which may produce an inflammation involving the covering of the cord or a hemorrhage either within the dura or outside of it and sometimes within the substance of the cord itself. Such cases, of course, are not assumed and dis-

ability which follows is legitimate, but these cases if they recover do so gradually and litigation has no effect on the time required for recovery.

SIGNS AND SYMPTOMS following concussion of the spinal cord are the most vague of any injury alleged to have been suffered by a claimant. Almost any sign or symptom may be expected to develop in such a condition. Pain is always complained of in the spinal column, yet when tapping the head or soles of the feet, such a claimant can never point out any special point where the pain is aggravated by such a procedure, thus proving that no point of inflammation exists between the vertebræ themselves, and practically proving that none exists within the spinal column. Tenderness is said to exist at various places along the course of the spinal column. If there has been an actual injury and tenderness does really exist, it is always in the same place, and even when diverting the mind of the claimant and making pressure at the point of tenderness, pain is always elicited. Mannkopff discovered the fact that if tenderness actually existed at a certain point that firm pressure at such a place produced acceleration of the pulse, the frequency of the pulse not being affected when tenderness is said to exist at various places when in reality it is not present. Nervousness is invariably complained of in such an injury, the individual stating that the least noise produces nervousness, that on account of this condition sleep is interfered with and that this nervousness results in fear of various things, such as a person being afraid to undertake a railway journey, a ride on a street car, in an automobile, descend in an elevator, etc. Physical weakness is generally complained of and inability to properly concentrate the mind on the usual duties of the occupation when the occupation requires such concentration, is almost invariably alleged to exist. Paralysis is often claimed to exist, but according to Walsham, an English surgeon, "in cases of paralysis after an accident, no lesion of the vertebral column or of the spinal cord has been discovered." A severe shaking up, a jolt or blow over the spinal column which produces some injury to the cord itself results in pain and tenderness at well marked places. In addition there is nervousness which gradually disappears and leaves no untoward effect. Such a jarring or shaking of the cord not infrequently produces constipation or diarrhea and sometimes difficulty in urination or retention follows.

DIFFERENTIAL DIAGNOSIS between signs and symptoms which actually exist and those which are reported to be present is sometimes an exceedingly difficult matter. Usually, however, a malingerer is easily detected. Signs such as wasting of muscles, paralysis which does not disappear under ether, ankle clonus, inability to control the movements of the rectum or bladder or any positive sign or symptom which indicates a lesion of the cord is sufficient to prove that such a condition exists. Claimants who are not actually suffering from any injury to the spinal cord usually allege nervousness, impairment of vision, inability to concentrate the mind, loss of sexual power, increased and exaggerated knee jerks, and pain and tenderness at various points along the spinal cord which cannot be verified and tenderness which is not present when the mind is diverted. In addition there are a number of other vague signs and symptoms which have no bearing on the case and which should not be considered as existing unless some signs and symptoms positively prove that the condition is as claimed. When rigidity or spasm of the muscles of the back on one side is present, it is an indication of an injury, as such a condition can rarely if ever be produced without a cause.

Malingerers probably develop more frequently from injuries which may or may not involve the spinal column than any other class, for the reason that they can allege that various vague signs and symptoms exist. These are sometimes hard to disapprove by a medical examination as not being present, and the only way to prove that they are malingerers is to pay them a certain sum of money and secure a release for the corporation which is held to be liable, when all the signs and symptoms referable to the alleged injury immediately disappear and the individual is in perfect health again. A sum of money in such cases is the best treatment that these people can receive, and unfortunately from a moral standpoint it is the only way in many instances to cure them.

Traumatic Hysteria according to Da Costa develops only in those predisposed by a neuropathic hereditary tendency, while traumatic neurasthenia may arise in anybody. In the first disease the accident is only the exciting cause; in the second disorder it is the cause. Traumatic hysteria is more frequent in females than in males,—its most pronounced effect being more on the mind than on the body. An individual of a neurotic disposition and having suffered from an accident believes that various symptoms

are in existence and more or less disability exists. Actual areas of pain or tenderness are greatly magnified, and from small beginnings great pain, large areas of tenderness and many poorly described symptoms follow.

Caries of the Vertebræ does not result from a concussion of the spinal cord. If such a condition is present, it was there before the alleged accident took place. Caries is diagnosed by pain which has existed for weeks and months. On tapping the head or soles of the feet, increased pain is elicited at the location of the diseased bone. When caries exist, the vertebræ are immovable at the point of disease and curvature of the spine is usually apparent.

TOTAL DISABILITY from injuries to the spinal cord which tear and lacerate the small blood vessels and nerves in preferred risks produce various lengths of disability. When the individual is not neurotic and the occupation is more profitable than would be the indemnity which would be secured from a corporation which may or may not be liable, this period of disability does not last longer than from 2 to 3 or 4 weeks. If the injury occurs to females and those of a highly nervous temperament, total disability in such a class of individuals is extremely uncertain, sometimes lasting weeks and months, the injury in such instances being magnified and disability greatly prolonged on account of the mental condition. Total disability in individuals who have no incentive to return to work and who think that by remaining idle they will receive more damages from a corporation, are usually totally disabled until a decision has been reached through the court.

PARTIAL DISABILITY following an injury to the spinal cord does not often exist in any class of risks, for the reason that the individual can usually resume all the duties of the occupation when part of them are taken up again.

EFFECTS: Injuries to the spinal cord that are not produced in connection with a fracture or dislocation and which result in short periods of disability have no effect on the insurability of the risk from three to six months after recovery is said to have been complete. Individuals with a history of having suffered such an injury and who make protracted claims on an insurance company or corporation which may be liable for the injury are uninsurable for any kind of a policy on account of the increased moral hazard which exists.

CHAPTER IX

INJURIES AND DISEASES OF THE MALE SEXUAL ORGANS AND SURROUNDING PARTS

ABRASIONS AND CONTUSIONS

INFORMATION: The injuries most commonly seen involving the penis, scrotum, testes and perineum are abrasions and contusions and these usually follow from blows delivered to this part of the body, or from falls in which the body alights astride of some hard object These injuries may be trivial, causing little or no disability or what apparently is a trivial injury may cause prolonged disability and permanent deformity.

SIGNS AND SYMPTOMS indicating injuries to these parts are noticed immediately after they occur. A dull nauseating pain instantly follows a blow involving the scrotum and testes and this in turn is quickly succeeded by swelling, but no alteration in the original shape of the parts affected. Extensive discoloration of the skin is an early and prominent sign; this usually appearing within the first twelve to twenty-four hours and remaining for a considerable time. When an injury to these parts is sustained, nervous shock is one of the prominent symptoms and persists for a variable length of time, according to the severity of the injury and the temperament of the individual.

DIFFERENTIAL DIAGNOSIS between accidental injuries to the male sexual organs and diseases of the same is extremely important, as a number of claims are made under accident policies when the disability is caused by disease. An accident if seen before the external signs are obliterated, shows uniform swelling of the parts with discoloration. Tenderness is present, but this never involves the cord of the injured side or sides, unless the blow has been extensive and has been sustained over the course of the cord when it is tender on pressure. If the swelling of the parts is due to venereal disease, the passage of urine will always show shreds of mucus floating in it, while if the injury is accidental in origin and no old existing venereal dis-

ease is present, it will be clear of these shreds. These two points, —absence of tenderness over the cord and clear urine,—are sufficient for diagnosing an accident and when present invariably indicate disease of the urethral canal. Injuries to the scrotum generally involve both testes, while venereal disease usually affects one; the left most commonly.

COMPLICATIONS: *Venereal Disease* may complicate an accidental injury to the male sexual organs, and if it does, insurance companies will not pay indemnity under an accident policy for the reason that the majority of policies eliminate indemnity when due to or complicated by venereal disease of any kind.

TOTAL DISABILITY in preferred risks suffering from an abrasion or contusion involving these parts, seldom lasts more than from 1 to 2 weeks. If the contusion has been moderately severe and has injured the urethra or one or both testes, total disability may last from 2 to 3 or 4 weeks in the same class of risks. Ordinary risks suffering from abrasions and contusions of these parts usually require from 1 to 2 weeks more than preferred risks; this being due to the fact that the upright position is usually demanded in the occupation with more or less movement, consequently such a person is unable to resume the occupation as early as a preferred risk.

PARTIAL DISABILITY of from 1 to 2 or 3 weeks is allowable to preferred risks who have suffered from an injury to these parts; this time depending on the location of the injury, its character and severity. Ordinary risks are seldom entitled to any partial disability.

EFFECTS: Abrasions and contusions to the male sexual organs and surrounding parts which do not result in permanent deformity or disability, render the individual insurable for all kinds of insurance as soon as recovery is complete. If a swelling of the testes follows a blow and is slow in disappearing, a sarcoma may result. In such cases all kinds of insurance would be withheld until a competent medical report showed no malignant disease to be existing.

INCISIONS AND LACERATIONS OF THE MALE SEXUAL ORGANS

INFORMATION: Injuries which tear and lacerate the male sexual organs are usually a degree beyond abrasions and

contusions. On account of the pliability of the skin covering these parts, lacerations are not very extensive externally, but the parts between, such as the urethra, blood vessels and cord in the scrotum are the ones generally involved and badly injured. A fall astride of a hard object seldom ruptures the skin of the penis, but frequently causes a partial rupture of the urethra; the same also applies when the scrotum is violently injured, the skin seldom being broken, but the contents of this sac may be badly injured.

SIGNS AND SYMPTOMS depend on the parts involved in the accident. If the urethra is injured or partially torn, blood is passed involuntarily or with urine from the meatus. This is accompanied by violent pain and much nervous shock. When the urethra is ruptured, the location is usually in the region of the bulb. If the rupture is posterior to an old stricture, retention of urine with extravasation into the perineal tissues may result. Severe injuries which lacerate the soft tissues of the scrotum produce a sickening pain, together with swelling and much discoloration. If the extravasated blood becomes infected an abscess results. Should the cord leading from one or both testes be involved in the injury, atrophy follows, but this is not apparent until some weeks or months after the swelling subsides.

COMPLICATIONS: *Perineal Abscess* frequently follows a rupture of the urethra due to the extravasation of blood and urine into the perineal tissue. When this condition occurs, total disability is increased according to the length of time required for the evacuation of the abscess and complete healing.

Extravasation of blood and urine into the perineal tissues is one of the frequent complications following a rupture of the urethra. This condition sometimes disappears without an operation, but usually an incision must be made into the perineum for the purpose of drainage and frequently this becomes infected and an abscess results as above described.

Atrophy of one or both testes follows a severe contusion and laceration involving them, with or without injury to the cord. If the cord is severed, atrophy of the corresponding testicle results, and if the other testicle for any reason or other is diseased, sterility follows.

Epididymitis may follow a severe blow or laceration of the testicle. Usually, however, this inflammation is due to venereal disease and when the result of the latter, evidence of a discharge

from the penis is present or shreds of mucus are found in the urine.

TOTAL DISABILITY following incisions and lacerations involving these organs depends greatly on the extent of the injury and the parts involved. When the urethra is torn and properly sutured at once, total disability in all classes of risks may last from 3 to 6 weeks only, while if good union is not secured, this form of disability may be very indefinite, lasting from 1 or 2 to 4 or 6 months and sometimes even longer. Incisions and lacerations involving the testes produce total disability of from 2 to 4 or 6 weeks in preferred risks; this time depending on the severity of the injury and the exact duties of the occupation. Ordinary risks are disabled by these injuries from 3 to 6 or 8 weeks.

PARTIAL DISABILITY in preferred risks following injuries to the urethra may require from 2 to 4 or 6 weeks. In the same class when the injury involves the scrotum and testes, from 1 to 2 or 3 weeks are usally sufficient. Ordinary risks are seldom entitled to any partial disability following injuries involving any of these parts.

EFFECTS: An individual presenting a history of partial or complete rupture of the urethra, accidental in origin, is not considered insurable for any kind of insurance unless a complete cure has resulted and no stricture has followed. Such a recovery is only ascertained after a careful examination by a competent physician. If recovery has been complete, all forms of insurance can be issued one to two years after that date. If one or both testes have been severely lacerated, all forms of insurance can be safely issued from three to six months after complete recovery, —provided no mental effect has been produced by the injury.

CANCER OF THE PENIS OR TESTES

INFORMATION: Cancer of the penis is usually found in males suffering with phimosis. It may be limited to the foreskin or involve the glans itself. When the glands of the groin are affected, an operation for the removal of a part of this organ requires the dissecting out of the affected glands. If a cancer involves one or both testes, it may be a sarcoma or carcinoma; the former results more frequently from injuries and is generally found in younger persons, while a carcinoma is more common in those past forty years of age.

SIGNS AND SYMPTOMS indicating a malignant growth involving the male sexual organs are the same as when found in other parts of the body; pain is a prominent symptom and is followed by swelling and later ulceration. When a growth of this character involves the penis it may cause obstruction by pressure to the outflow of urine. If the testes are the parts affected, the epididymis is usually involved. When this condition results, there is a rapid increase in the size of the parts, with pain and a feeling of great weight to the organ. The glands of the groin are early affected.

DIFFERENTIAL DIAGNOSIS: *Benign Neoplasms* are distinguished from a malignant tumor by the history. In the former growth is slow and remains encapsulated, the epididymis and inguinal glands are not involved and ulceration does not follow. Loss of weight is uncommon and pain is a rare symptom.

Syphilitic Enlargement of the Testes occurs and the swelling is sometimes claimed to be accidental in origin. When this condition is present, a history or evidence of syphilis having existed at one time can be elicited, and if this is not possible, treatment by mercury and iodides reduces the enlargement which is uniform in size, causes no pain and shows no evidence of a contusion or abrasion of the scrotum.

Orchitis and Epididymitis due to venereal infection are frequently claimed as the result of accidents, and when this condition is present, one or both testes may be involved, together with the epididymis. There is swelling with redness of the scrotum, great tenderness on pressure and constant pain which is worse when the parts are not supported. Venereal disease is positively eliminated by an examination of the urine which does not show shreds of mucus, if urethral disease is not present. In addition one or both cords are tender when the enlargement is due to a pre-existing gonorrhea.

Tuberculosis of the Testes may follow when this disease is present in some other part of the body. It may be a primary affection in either the testicle or epididymis, usually the latter, and if only one testicle is involved the other one soon becomes affected. It is more common in young men and most frequently develops after an injury or some form of irritation which causes an inflammation of the testicle or epididymis. This disease is diagnosed by the nodular swellings which soon coalesce. Tenderness is slight and little, if any, pain exists.

HOUSE CONFINEMENT does not occur when cancer of the male sexual organs exists until an individual enters a hospital for an operation, and this time is seldom more than from 3 to 4 weeks.

TOTAL DISABILITY as the result of a cancer involving the male sexual organs, does not ensue until an operation is performed, when the individual is totally disabled until recovery takes place and this time is usually not more than from 3 to 6 weeks. If healing does not follow, ulceration supervenes and total disability may persist until the disease becomes disseminated to other parts of the body and a fatal termination occurs.

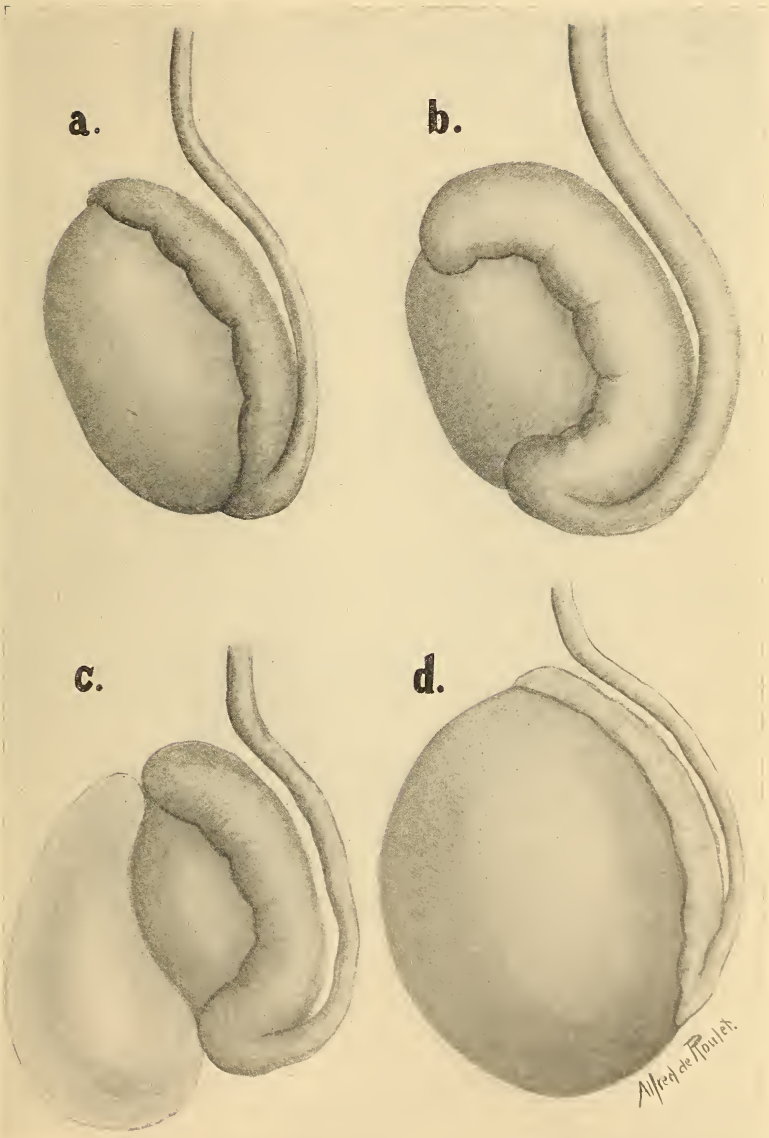
PARTIAL INDEMNITY FOR TOTAL DISABILITY if allowable by the policy after the termination of house confinement, may demand from 1 to 2 or 3 weeks in cases where house confinement has been short.

EFFECTS: When cancer of the penis has existed, either affecting the skin or glans itself and an operation without much mutilation has followed, life or health insurance would not be issued to such a person until at least from three to five years had elapsed without any signs or symptoms referable to the disease, and even at the end of such a period it is questionable if these forms of insurance should be granted. Accident insurance can generally be safely issued from nine to twelve months after complete recovery. If the disease affects one testicle only and that is removed by operation and no recurrence takes place within three to five years, life or health insurance would be considered and issued by some companies. If both testes are involved and removed, insurance of all kinds would be denied such a person.

EPIDIDYMITIS AND ORCHITIS

INFORMATION: Epididymitis or inflammation of the epididymis is usually complicated with an inflammation of the testicle and in many instances follows a urethral infection It may, however, be due to traumatism, such as the passing of an instrument through the urethra and fragments of calculi which are voided with the urine and rarely results from blows or straining in lifting heavy objects. Acute orchitis is an inflammation of one or both testes and may be due to traumatism, exposure, and as a complication to such diseases as mumps, rheumatism and certain

PLATE II



Differential Diagnosis of Acute Enlargements of the Testis and Epididymis (Eisendrath).

a, Normal testis. b, Gonorrheal epididymitis and vas deferentitis. c, Acute gonorrheal epididymitis, deferentitis and acute gonorrheal hydrocele. d, Acute orchitis following trauma of the testis, and the characteristic enlargement of the body of the testis (orchis) following mumps, and other infectious diseases.

infectious fevers, although in the vast majority of cases it is caused by gonorrheal infection. Chronic orchitis follows the acute form and is usually complicated with an inflammation of the epididymis.

SIGNS AND SYMPTOMS of an acute epididymitis when due to an urethral infection may occur at any stage of the gonorrhea, usually, however, it does not develop until after the second week of the disease and generally results in entire cessation of the discharge. Casper says twenty per cent. of all cases of gonorrhea are attacked with epididymitis. This form of inflammation begins with a sense of weight in the testicle affected followed by pain which extends to the groin, extreme tenderness of the parts, anorexia, fainting attacks and swelling of the epididymis and testicle. The cord is tender and painful and this extends and involves the groin, so that pressure over the cord in this region causes pain.

If an orchitis results from a gonorrheal infection, the discharge ceases immediately and is followed by swelling, pain and tenderness in one or both testes. Systemic involvement is indicated by increased pulse, elevation of temperature, nausea, vomiting and prostration. If the inflammation is due to other causes than venereal disease, there is absence of venereal infection, swelling, pain and tenderness are present and almost invariably if the infection is caused by accidental injury, discoloration of the scrotum occurs and absence of pain over the cord in the groin is marked when this infection is not caused by gonorrhea.

DIFFERENTIAL DIAGNOSIS: *Syphilitic Enlargement of the Testes* is always preceded by that disease, but frequently a history of this cannot be elicited. If the enlargement is specific in origin the swelling is limited to the body of the testicle, whose contour and shape are unchanged. This enlargement is very hard and when compressed does not cause nausea as results when compression is applied to a normal testicle. A hydrocele usually accompanies a syphilitic enlargement of this organ and one of the testes only is generally involved.

Orchitis due to injury is differentiated from orchitis caused by venereal infection by the fact that in the former, evidence of traumatism to the scrotum is invariably present, such as abrasions or contusions which result in discoloration. Pressure on the cord as it enters the abdominal cavity shows the absence of tenderness when an orchitis is accidental in origin, while if caused by gonorrhea, tenderness is always elicited. The urine is unaffected when

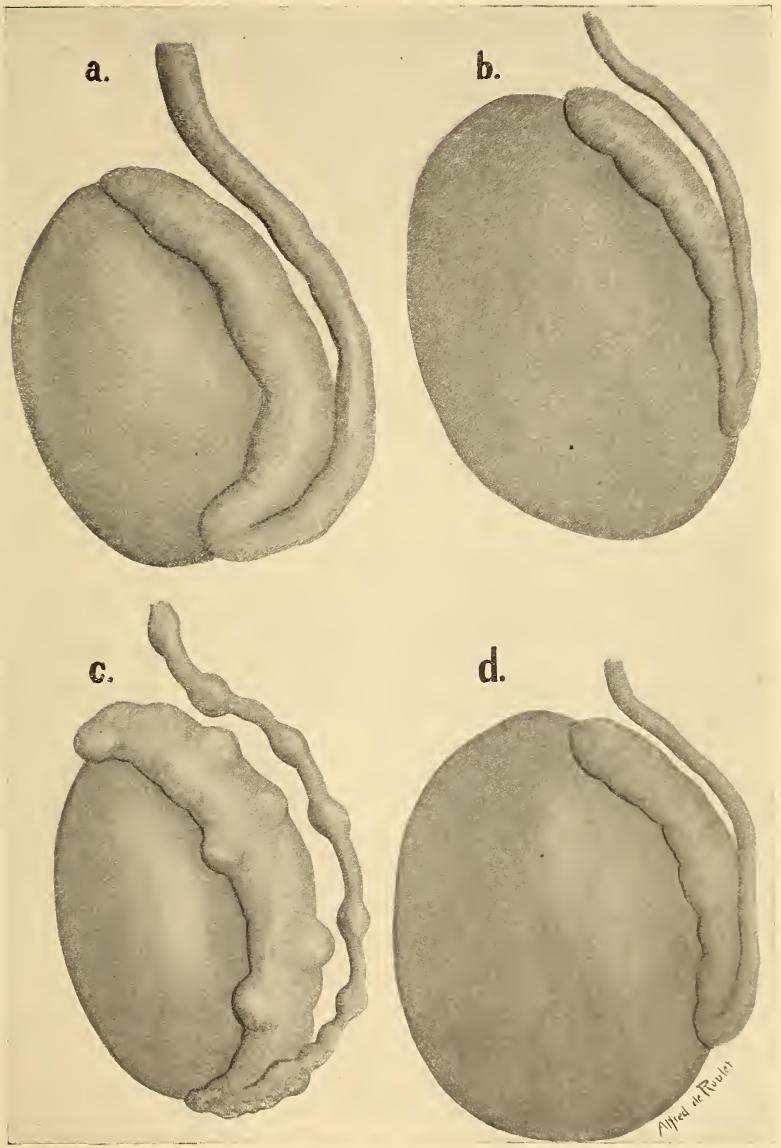
this disease is caused by injury, but when due to an inflammation of the urethra, it contains shreds of floating mucus. The epididymis is generally involved when an orchitis is caused by venereal infection and this is not present when it is accidental in origin.

Tuberculous Disease of the Testicles should not be mistaken for an acute inflammation due to injury or to venereal infection, because if this condition is present it is important that such a fact be made known to the insurance company carrying the risk. When this disease involves the testes it is more frequent in young adults and almost invariably follows an infection in some other part of the body; one testicle is first involved and is soon followed by the disease in the other one or it may first appear in either epididymis and spread to the corresponding testicle. This condition when present in a quiescent state, is prone to develop quickly after a slight injury to these organs. The disease commences with a nodular swelling and these nodules soon coalesce and soften and this is followed by redness of the skin which in time ulcerates. A hydrocele of small dimensions not uncommonly accompanies this condition.

COMPLICATIONS: *Urethral Disease* in the majority of cases is the forerunner of an infection involving the testes and epididymis, and when such a disease exists, an insurance company is not usually liable and will not pay for the resulting disability.

Parotiditis is often followed by involvement of the testes and in this condition generally both are inflamed, tender and painful. When inflammation of the testes complicates an attack of mumps, disability is prolonged one to two or three weeks; this time depending on the severity of the infection.

HOUSE CONFINEMENT following an inflammation involving one or both testes and the corresponding epididymis, depends on the cause of the inflammation for the length of time house confinement is necessary. When orchitis complicates an attack of gonorrhea, house confinement is made necessary at once and generally lasts from 1 to 2 or 3 weeks; this time depending on the treatment and the time at which it was commenced, the severity of the infection and the previous occupation of the individual. If an orchitis follows a blow to the testes, house confinement of from 1 to 2 weeks is necessary, and this time depends on the severity of the blow, the occupation of the individual and



Differential Diagnosis of Chronic Enlargements of the Testis and Epididymis (Eisendrath).

a, Syphilis of testis. This is one of the two forms in which syphilis affects the testis. In this variety both testis, that is the body of the testis (orchis), and epididymis are enlarged. b, Second variety of syphilitic affection of the testis. In this form the orchis or body of the testis is predominantly enlarged, giving rise to a large tumor, syphilitic orchitis, or sarcocele. c, Tuberculosis of the testis. This illustration shows the most frequent localization of tuberculosis, especially in its early stages, involving especially the tail of the testis and the vas deferens, in the form of a nodulated enlargement of the former, and a beaded one of the latter. d, Tumors of the testis This illustration shows how tumors, both benign and malignant, of the testis almost exclusively affects the body of the testis.

the physical condition. A syphilitic orchitis does not produce this form of disability, although persons with such a condition frequently make claims for disability alleging that the swelling is accidental in origin or due to exposure. If an orchitis follows an acute, specific fever, house confinement is prolonged from 1 to 2 or 3 weeks and sometimes longer; this period depending on the physical condition of the individual at the time metastasis takes place, the severity of the infection and the occupation. If an epididymitis alone is present, house confinement of from 5 to 10 days are generally enough for the individual to recover sufficiently to return to some of the duties of the occupation.

TOTAL DISABILITY is not often payable under an accident, health or disability policy, when an orchitis results from a venereal disease. The majority of policies specifically eliminate indemnity for disability resulting from this disease, either directly or indirectly. If an orchitis follows an injury total disability of from 2 to 3 weeks is usually necessary in preferred risks. If the same condition is seen in ordinary risks, from 2 to 4 weeks of this form of disability are required. The same period of disability in both classes of risks also applies when this disease is the result of cold or exposure. Syphilitic enlargement does not cause total disability and even if it did, indemnity would seldom be payable under the terms of the policy. Total disability from a epididymitis alone which results from an accident, in preferred risks seldom requires more than 1 week, while those in the ordinary class demand from 10 to 14 days.

PARTIAL INDEMNITY FOR TOTAL DISABILITY if payable by the policy after the termination of house confinement in individuals suffering from an orchitis which is covered by the conditions of the policy, requires from 1 to 2 weeks in the majority of cases. When the inflammation is accidental in origin, from 1 to 2 or 3 weeks of partial disability are payable to preferred risks; this time depending on the severity of the injury, the degree of the resulting inflammation and the exact duties of the occupation. Ordinary risks are not often entitled to partial disability following an injury to these parts.

EFFECTS: Individuals having suffered from an accident involving one or both testes and surrounding parts are insurable for all kinds of insurance from two to four months after complete recovery, provided a medical examination shows no evidence of a malignant growth as the result of the injury. If an orchitis or

epididymitis is venereal in origin and is so stated on the application, an insurance company would question the advisability of issuing any kind of a policy to such a person on account of the moral hazard involved. If the inflammation is syphilitic or tuberculous in origin all forms of insurance would be denied such an individual.

FISTULA IN ANO

INFORMATION: A complete fistula in ano is an opening between the lower part of the rectum and the external surface of the body. It may be so small that gas only escapes or again it may be large enough for small particles of fecal matter to pass through. When the fistula opens externally and does not communicate with the rectum or when it opens into the rectum and does not have an opening in the skin it is known as a blind fistula. A fecal fistula in this position in the majority of cases is tuberculous in origin, although it may be due to ulceration inside of the rectum, foreign bodies causing pressure, and traumatism.

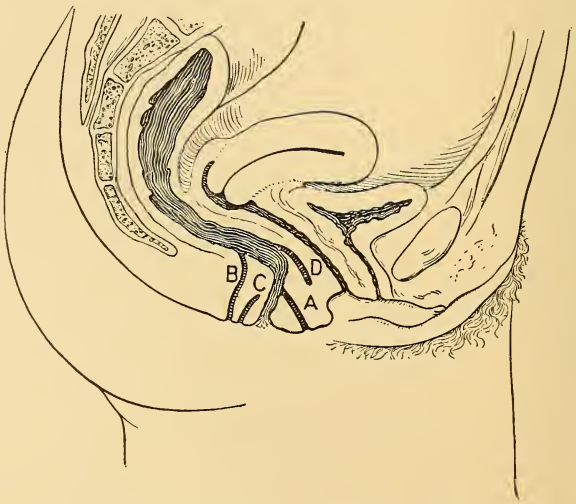


FIG. 37.—FISTULA IN ANO. (Fowler).
A, Complete fistula, low in rectum; B, complete fistula, high in rectum; C, external blind fistula; D, internal blind fistula.

SIGNS AND SYMPTOMS are sometimes present before the fistula ruptures externally when the cause has been ulceration from pressure, micro-organisms or other reasons. In such cases there is a constant, dull, aching pain with a desire to frequently

defecate, a bearing down feeling and during the passage of feces this pain is intensified, unless the evacuations from the bowels are kept in a semi-liquid condition. If the fistula opens externally, there is a constant discharge of pus with a fecal odor. This discharge may persist for days or weeks and cause practically no disability, but in time the parts become excoriated and movement in the upright position becomes so painful that disability results.

DIFFERENTIAL DIAGNOSIS: *A Tuberculous Fistula* must be differentiated from one accidental in origin and this is extremely hard in some cases. Usually, however, by careful examination a tuberculous foci will be found in some part of the body. The opening in this form of fistula is generally surrounded by cauliflower-like granulation tissue, with an enlarged red and edematous area.

COMPLICATIONS: When a fistula involving the rectum has been existing for weeks or months, the general physical condition of the individual is much deteriorated and if the fistula is tuberculous in origin, this disease is found in some part of the body,—usually the lungs.

HOUSE CONFINEMENT does not result when a fistula is present until the physical health has gone so far below par or excoriations around the fistula have become so aggravated that confinement to bed is necessary for the treatment or radical cure of this condition. If an attempt is made to close the fistulous opening by medical means, house confinement may last from 1 to 2 or 3 weeks; this time depending on the cause of the fistula, its extent and the length of time it has been in existence. When house confinement results on account of an operation being undertaken for its cure, it generally lasts from 3 to 6 weeks, this period depending on the above enumerated conditions.

TOTAL DISABILITY does not ensue when this condition is present until it becomes so aggravated that further attention to business is impossible, or its cure is attempted by medical or surgical means. In the former total disability is uncertain and may last from 1 to 2 or 4 weeks, and when an operation is performed total disability does not last much longer than the period of house confinement; this time generally being from 3 to 4 or 6 weeks.

PARTIAL INDEMNITY FOR TOTAL DISABILITY if payable by the policy after the termination of house confinement, is not required in cases in which a cure is attempted by

medical means, but when an operation is performed from 1 to 2 weeks of this form of disability may be necessary in some cases.

EFFECTS: If a history of a recent fistula exists, insurance companies look with disfavor on such applications and few companies will accept individuals for life or health insurance until at least two years have elapsed after the complete healing and cure of the fistula. If the fistulous opening has been tuberculous or there is any possibility of such a condition having existed, such a person would be uninsurable for any kind of a policy. Accident insurance can generally be issued to individuals having suffered with a fistula which is not tuberculous in character, from two to four months after complete closure of the opening.

GONORRHEA

SYNONYMS: Specific urethritis; venereal catarrh; clap; tripper.

INFORMATION: Gonorrhea is an acute inflammation of the genital mucous membrane, of venereal origin, due to the deposition and multiplication of gonococci in the cells of the membrane and a mixed infection with the cocci of suppuration (Da Costa). This disease being venereal in origin, indemnity is not often payable under an accident or health policy when disability results and very few individuals attempt to make a claim alleging such a cause.

SIGNS AND SYMPTOMS are well known; among the more common are swelling of the penis with a discharge from the urethra. This discharge contains the specific micro-organism causing the disease. The period of incubation varies from a few hours to one to two weeks.

COMPLICATIONS: *Gonorrheal Arthritis* or gonorrheal rheumatism is one of the frequent complications and must be differentiated from articular rheumatism. It occurs more frequently in the male than in the female and most often involves the joints of the knees, next in frequency are the ankles and the joints of the fingers and hands. When an articulation becomes affected, the attack is sudden in onset and is followed by pain which becomes very severe, swelling with fluid in the joint and moderate fever which soon subsides. Gonorrheal arthritis is of shorter duration and of less intensity than articular rheumatism and does not yield promptly to anti-rheumatic treatment.

Orchitis and Epididymitis are frequent complications of this disease when in the declining stage. The differential diagnosis between disease and accident to these organs is discussed under Orchitis and Epididymitis.

Enlargement of the Glands of the Groin or buboes are frequent during an attack of this disease. The glands on one or both sides become enlarged, painful and tender. If suppuration ensues, redness appears, to be followed by softening and breaking down of the skin covering the glands with a discharge of pus. Usually, however, when this complication arises disability does not ensue until suppuration follows, and an operation becomes necessary, then house confinement with total disability for some time is required.

Gonorrheal Ophthalmia is sometimes a complication of venereal diseases and when present total disability ensues in all cases and generally the loss of sight in one or both eyes results. In such cases it would be necessary to secure a culture from the discharge, in order to prove positively that the loss of sight was gonorrheal in origin, when an insurance company would probably not be liable for the temporary or permanent disability.

Chancroid is frequently seen in conjunction with gonorrhea and usually results from contact during sexual intercourse. It is a local sore and yields to local treatment and when present it does not prolong disability, not even producing it, except in cases when it becomes phagedenic.

Chancre often complicates gonorrhea, but as it represents a distinct and systemic disease which would not often be covered by an insurance policy, its consideration is unimportant.

HOUSE CONFINEMENT does not exist in this disease unless some of the complications follow, when this period is governed by the character of the complication and its severity.

TOTAL DISABILITY is not often payable under an accident or health policy to an individual suffering from this disease, even though a complication is existing. Claims are frequently made when one of the complications of gonorrhea is present, with the idea or intention of getting indemnity. If a proper medical examination is made, however, a physician is able to determine that the primary cause of disability is venereal in origin and therefore indemnity is not usually payable.

PARTIAL INDEMNITY FOR TOTAL DISABILITY

if payable by the policy after the termination of house confinement, should very rarely be paid in any case of this disease.

EFFECTS: Although all insurance companies ask the question if any venereal disease has been suffered, the answer is invariably "no" even though the majority of males have been attacked by this disease, and especially during the period from eighteen to thirty years of age. If it is known that such a condition was present and pronounced cured by a competent physician, life or health insurance could be safely written from three to six months after complete recovery. Accident insurance in such cases would be granted from one to two months after recovery was said to be complete. The moral hazard in individuals who have suffered from this condition is always to be considered in the granting of any form of insurance and the various insurance companies have different ways of treating cases with a history of this disease; some being very strict in regard to the moral hazard, while others are more lax.

HEMORRHOIDS

SYNONYMS: Piles; bleeding piles; skin tabs.

INFORMATION: Hemorrhoids are varicose tumors of the rectum and may be external when they originate without the external sphincter and internal when the source of origin is within this sphincter muscle. External hemorrhoids are frequently seen and seldom cause disability, unless by irritation they ulcerate and form large masses of broken down tissue. Internal hemorrhoids that are covered by mucous membrane are much easier lacerated and torn and therefore more prone to cause disability. Either variety may be due to disease or the passing of hard masses of fecal matter and sometimes this condition results from traumatism, such as kicks or a fall in which the body alights astride of some hard fixed object.

SIGNS AND SYMPTOMS: External hemorrhoids are small protuberances around the anus and are always covered by skin. If ulceration results, an open sore is present and is accompanied by pain and little, if any, bleeding. Itching is a common symptom of this condition and is more pronounced at night. Internal hemorrhoids which do not protrude beyond the sphincter muscle seldom show any symptoms until a prolapse occurs, when there is itching, pain and tenderness, and if rupture follows, bleed-

ing is the result. They frequently ulcerate and either produce disability at once or require an operation for a cure.

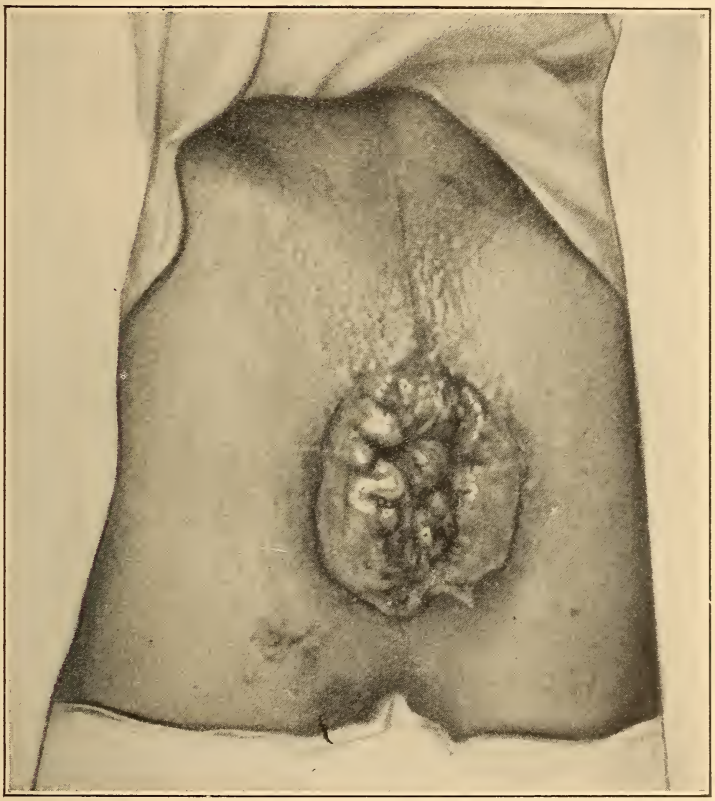


Fig. 39.—Ulcerating and prolapsed internal hemorrhoids. (Berg).

DIFFERENTIAL DIAGNOSIS is important from an insurance point of view, between an old standing hemorrhoid which may be claimed as due to an injury and a recent one which is the result of traumatism. When a hemorrhoid has been present for some time and becomes acutely inflamed from the passage over it of fecal matter it may appear as the result of an injury, but in such cases an examination will show that the small tumor mass is composed of fibrous tissue, while a recent hemorrhoid as the result of accident is tense, red and inflamed, is filled with blood, tender, painful and contains no fibrous tissue.

HOUSE CONFINEMENT does not result in individuals suffering with hemorrhoids until the condition becomes acutely

inflamed. When this follows, house confinement of 3 to 7 days may be necessary before the inflammatory condition is relieved. If a hemorrhoid results from an accidental injury, house confinement of 1 to 2 weeks is often necessary before the condition is sufficiently recovered for the individual to resume a part of his occupation. If an operation is performed, house confinement of 1 to 2 weeks is necessary.

TOTAL DISABILITY if caused by an acute inflammatory action involving old standing hemorrhoids, lasts from 3 to 7 days, at the end of which time the inflammation has sufficiently subsided to allow at least a partial return to the occupation. If traumatism causes this condition, total disability of 1 to 2 and sometimes 3 weeks is necessary and this is especially true when the occupation of the individual necessitates the upright position with more or less walking. Operative measures involving the removal of the abnormal condition, requires from 1 to 3 weeks before the occupation can be resumed.

PARTIAL INDEMNITY FOR TOTAL DISABILITY if payable by the policy after the termination of house confinement is not necessary when the condition is an old standing one. If the disability is the result of accidental injury, partial disability of 1 to 2 weeks may be necessary; this time depending on the severity of the injury and the exact duties of the occupation.

EFFECTS: Individuals suffering from hemorrhoids that have a history of having been acutely inflamed a number of times are not insurable for health insurance without a waiver being placed on the policy eliminating indemnity for this source of disability. Life or accident insurance, however, could be safely issued to such persons as soon as recovery becomes complete.

HYDROCELE AND HEMATOCELE

INFORMATION: A hydrocele is a collection of fluid in the tunica vaginalis testis and is usually of unknown origin, although it is often claimed that such a condition results from traumatism. Prominent surgeons, however, seldom see more than one or two cases of hydrocele of traumatic origin during their period of practice, showing that this collection of fluid is rarely accidental in origin. A hematocele is generally a collection of blood in an old hydrocele and most frequently follows a puncture of the hydrocele by a trocar for its cure.

SIGNS AND SYMPTOMS: When a hydrocele develops it does so very gradually, causing a swelling which contains a straw-colored fluid. This swelling is pyriform in shape and translucent, fluctuates and the testicle is found at the lower and back part of

Fig. 40.—Hydrocele. (Keen and White).

the sac. As the swelling enlarges, the scrotum becomes tense and of a reddish color. Pain is generally absent and a feeling of weight is complained of unless the parts are supported by a suspensory bandage.

DIFFERENTIAL DIAGNOSIS: *Hydrocele* as the result of an accident would closely follow the date of injury and in addition there would be discoloration of the scrotum, with pain and tenderness. If a true history can be obtained it would be found that no swelling existed before the accident and at the time the injury occurred, pain of a nauseating character would be present.

COMPLICATIONS: *Hematocele* may complicate a hydrocele and when this condition supervenes there is a pre-existing hydrocele which has been injured by external means, or a puncture for the cure of this condition ruptures a small blood vessel and the sac fills up with blood instead of a straw-colored fluid.

HOUSE CONFINEMENT does not exist when a hydrocele is present, unless the individual suffers an injury which involves this swelling or voluntarily undergoes an operation for the cure of the condition. If a hematocele is present, house confinement of 1 to 2 weeks may be necessary; this time depending on the occupation of the individual and the method of treatment.

TOTAL DISABILITY does not occur in cases of hydrocele which have been of long standing, but if this enlargement is the

result of accidental injury, total disability of 2 to 4 weeks may be necessary on account of the external injury to the scrotum and testes. When an individual suffering from this condition undergoes an operation for its cure, total disability depends on the method of treatment. If a cure by puncture only is attempted, from 2 to 3 days are generally sufficient, but if the sac is removed by a cutting operation, from 2 to 4 weeks are required for complete healing. An accident or disability policy would not cover disability when this condition has existed for some time and an operation is voluntarily undergone.

PARTIAL INDEMNITY FOR TOTAL DISABILITY if payable by the policy after the termination of house confinement is never allowable in cases suffering with a hydrocele or hematocele, unless an operation has been performed, when 1 to 2 weeks may be necessary in some cases.

PARTIAL DISABILITY of 1 to 2 weeks may sometimes be required when a hydrocele or hematocele develops from an accidental injury and total disability has immediately ensued.

EFFECTS: Individuals suffering from a hydrocele or hematocele are usually considered insurable for all kinds of insurance without regard to this condition. If an operation is performed insurance would hardly be granted until one to two months after complete recovery.

ISCHIO-RECTAL ABSCESS

INFORMATION: An ischio-rectal abscess is a collection of pus in the ischio-rectal fossa and is said to be due to cold or exposure, the passage of hard fecal masses which cause ulceration and this is followed by infection which extends and involves the fat in this fossa, ulcerated hemorrhoids and by external traumatism, such as kicks or blows. An abscess in this situation is often tuberculous in origin and when existing, the differential diagnosis between an abscess caused by pyogenic bacteria must be made from one caused by tubercle bacilli and mixed infection.

SIGNS AND SYMPTOMS begin with a swelling which soon becomes hard and brawny. Slight discoloration of the skin appears and this takes on a purplish hue. Pain is hardly noticeable at first, but later becomes severe and especially when a bowel movement occurs. Tenderness over the fossa involved, with a hectic temperature are present. Unless an ischio-rectal abscess is opened externally, it ulcerates at the point of least resistance

and evacuates itself into the rectum. This results in a fistula and prolongation of disability.

DIFFERENTIAL DIAGNOSIS between ischio-rectal abscess caused by tubercle bacilli and pyogenic bacteria is usually not made until the abscess is evacuated and the microscope shows the presence of tubercle bacilli in the pus. A tuberculous abscess may have cauliflower-like growths around the orifice and requires a more extended time in healing. This disease when existing is usually found involving some other part of the body.

COMPLICATIONS: *A Fistula* always follows an ischio-rectal abscess unless an external opening is made into this fossa for the purpose of evacuating the pus before nature makes the opening into the rectum. When the abscess follows an ulceration of the rectum, a fistula is already existing and if this complication is present disability is greatly prolonged.

HOUSE CONFINEMENT of 2 to 4 weeks is usually necessary when the ischio-rectal fat becomes infected and an abscess results.

TOTAL DISABILITY in all classes of risks lasts from 3 to 6 or 8 weeks when this form of abscess is present; this time depending on the duties of the occupation of the individual and the method of treatment. If an abscess in this situation is opened early and especially if no fistula exists, total disability is shortened. When a rectal fistula complicates the case and an operation is necessary for closing the orifice between the bowel and the fossa, total disability of from 6 to 8 or 10 weeks is often required.

PARTIAL INDEMNITY FOR TOTAL DISABILITY if payable by the policy after the termination of house confinement sometimes requires from 2 to 4 or 6 weeks; this time being demanded when the period of house confinement is short. If the abscess results from traumatism, partial disability of from 2 to 4 weeks is frequently necessary.

EFFECTS: Individuals with a history of having suffered from an ischio-rectal abscess in which the cause is supposed to be tuberculous in origin, are uninsurable for any kind of a policy. When the abscess results from infection through the bowel or by external traumatism, all forms of insurance can be safely written from three to six months after complete recovery.

ENLARGEMENT OF THE PROSTATE GLAND

SYNONYMS: Acute prostatitis; chronic prostatitis.

INFORMATION: Enlargement of the prostate gland may be due to an acute or chronic inflammation. Acute prostatitis most frequently follows or complicates an attack of gonorrhea. It may, however, result from the extension of an inflammation involving adjacent parts, infection from the passage of stone from the bladder or instruments through the urethra; it also accom-

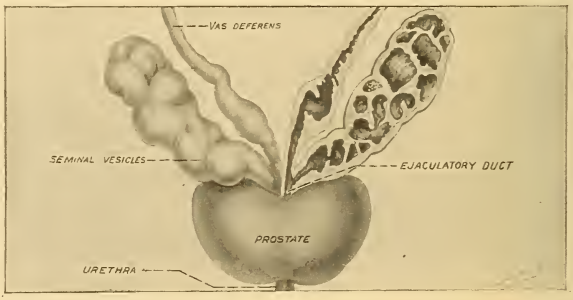


Fig. 41.—Prostrate gland and appendages. (Campbell).

panies certain infectious fevers. Chronic prostatitis is more commonly the result of gonorrheal infection. It may, however, be due to stone in the bladder, stricture of the urethra and in men fifty years of age or over, it is usually a chronic condition.

SIGNS AND SYMPTOMS of acute or chronic prostatitis follow enlargement of this gland. There is frequent micturition, pain which is complained of in the region of the neck of the bladder, tenderness in the perineum and sometimes bulging of this part of the body. If a finger is introduced into the rectum, the enlarged gland is easily detected and pressure causes increased pain and sometimes a discharge of prostatic fluid. A chronic enlargement results in residual urine and often in chronic cystitis.

COMPLICATIONS: *Chronic Cystitis* is the most frequent complication resulting from an enlargement of this gland and is usually found in men past fifty years of age. When the gland becomes so enlarged that urination is greatly interfered with, the use of a catheter becomes necessary. Enlargement of the prostate gland is often sarcomatous and if this complication exists it is generally not diagnosed until the gland is removed, when the microscope shows the true cause of the enlargement.

HOUSE CONFINEMENT in an attack of acute prostatitis lasts from 1 to 2 or 3 weeks. When the condition is chronic, house confinement does not ensue unless an operation is performed for the removal of all or part of the gland, or a complication arises. If an operation is undergone the length of house confinement depends on the method of operating. When a perineal incision is made house confinement of from 3 to 5 weeks is usually sufficient. If the gland is removed by the suprapubic method, house confinement of from 4 to 6 or 8 weeks is necessary.

TOTAL DISABILITY of 2 to 3 weeks is usually required in an acute attack of prostatitis; this time is usually not payable if the disease is venereal in origin. When a chronic enlargement of the gland exists and an acute inflammation supervenes causing house confinement and an operation, total disability of from 4 to 6 weeks is necessary when the gland is removed by the perineal route. If removal is done through the abdominal wall total disability lasts from 6 to 8 or 10 weeks.

PARTIAL INDEMNITY FOR TOTAL DISABILITY if payable by the policy after the termination of house confinement may require from 1 to 3 or 4 weeks; this time depending on the physical condition of the individual after the termination of house confinement and the exact duties of the occupation.

EFFECTS: An acute inflammation of this gland has no effect on the insurability of an individual for any kind of insurance and as soon as recovery is complete, all forms of insurance can be safely issued. When an operation is performed for its removal in old or middle-aged men, life or health insurance can usually be safely granted from three to six months after complete recovery, provided the enlargement has not been malignant in character. Accident insurance in such cases can be issued as soon as recovery is complete.

INJURY TO THE MALE URETHRA

INFORMATION: Rupture of the male urethra is a condition in which the outlet from the bladder is either partially or completely severed. When the rupture occurs it is almost always found in the perineum and is due to pressure of the urethra against a solid body, such as the pubes or when a fall is sustained and the body alights astride a rigid substance.

SIGNS AND SYMPTOMS follow immediately after the injury has been sustained. Pain is first complained of and this is aggravated by movement or attempts to urinate and when this function is accomplished blood precedes the passage of urine. Retention of urine frequently follows such an injury. Hemorrhage occurs, some of the blood entering the bladder, but in the majority of cases it is retained in the perineum and this causes bulging and later discoloration. This blood sometimes extends into and involves the scrotum, resulting in swelling and discoloration. If an operation is not performed early, extravasation of urine into the perineal tissues occurs, causing edema and later sloughing of the parts.

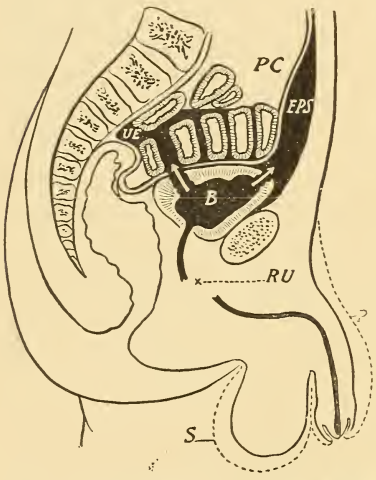


FIG. 42.—RUPTURE OF THE MALE URETHRA AND BLADDER. (Keen's Surgery)

RU, rupture of urethra associated with extravasation of urine into the scrotum (S) and penis (p); B, bladder. The arrow upon the anterior wall indicates an extraperitoneal rupture of the bladder with extravasation of urine into the extraperitoneal cellular tissues around the bladder and between the peritoneum and anterior abdominal wall (EPS). The arrow situated upon the posterior wall and the fundus of the bladder indicates the escape of urine through an intraperitoneal tear into the free peritoneal cavity. The black area (UE) indicates the urine escaping between the coils of intestine into the general peritoneal cavity (PC).

COMPLICATIONS: *Cystitis* frequently follows a rupture of the urethra. If this complication ensues, however, the length of disability is uninfluenced, for the reason that the complication usually disappears before recovery takes place.

Abscess of the Perineum is a common complication following a rupture of the urethra and is due to the extravasation of blood and urine into the soft tissues in this situation. When it occurs disability is not often prolonged, as this complication also disappears before recovery from the rupture of the urethra is complete.

HOUSE CONFINEMENT depends on the degree of injury to the urethra. If a partial rupture has occurred and an early operation is performed, house confinement of from 2 to 3 or 4 weeks is usually sufficient. When the urethra is badly torn and lacerated and requires an extensive operation for its repair, house confinement of from 4 to 6 or 8 weeks is often demanded.

TOTAL DISABILITY following a partial rupture of the urethra lasts from 3 to 6 or 8 weeks; this time depending on the extent of the laceration, the rapidity with which healing takes place and the occupation of the individual. When the laceration has been severe total disability of from 8 to 12 or 16 weeks is often necessary; this time also depending on the above named conditions.

PARTIAL DISABILITY generally follows an accident of this character and the length of time depends on the severity of the injury and the occupation of the individual. A slight injury with only a partial rupture of the urethra may require from 1 to 3 or 6 weeks of this form of disability. If a severe injury has been sustained, partial disability of from 2 to 3 or 4 months is sometimes necessary.

EFFECTS: Individuals having suffered from a partial or complete rupture of the urethra are thereafter not considered insurable for life or health insurance until five to ten years have elapsed and no difficulty in urinating is experienced. Accident insurance, however, can usually be safely issued from three to six months after a complete recovery.

URETHRITIS

INFORMATION: Urethritis or inflammation of the urethra may be due to a number of causes; the most frequent, however, being gonorrhea. It may also be due to any form of irritation applied to the urethra, or external traumatism and is sometimes found in connection with gout, rheumatism or tuberculosis. If an inflammation of this portion of the body occurs it is highly important to an insurance company to eliminate venereal disease, for the reason that the majority of companies will not pay indemnity under an accident or health policy when disability is the result of venereal infection.

SIGNS AND SYMPTOMS: A discharge is generally the first sign of a urethritis unless the infection is accidental in origin, when pain would precede the discharge. Pain is made worse by attempting to urinate, swelling of the penis occurs and complications resulting from the extension of the infection may follow.

DIFFERENTIAL DIAGNOSIS between a urethritis which is venereal in origin and a nonspecific one is important. A simple urethritis may result from traumatism and produce a

discharge, but the use of the microscope will serve to quickly eliminate the gonoccocus and show that the disease is not venereal in origin.

COMPLICATIONS often follow an inflammation of this part of the body and are described under Gonorrhea.

HOUSE CONFINEMENT depends on the cause of the urethritis. If venereal in origin or due to simple infection, house confinement seldom exists. If the inflammation follows an accidental injury, house confinement is described under Injury to the Male Urethra.

TOTAL DISABILITY never occurs when a urethritis is the result of a simple infection or venereal in origin, unless the disease is complicated by one of the numerous complications which result from the extension of this inflammation. If the urethritis is the result of an accidental injury, the length of total disability is described under Rupture of the Male Urethra.

PARTIAL INDEMNITY FOR TOTAL DISABILITY following an inflammation of the urethra is sometimes demanded, but claims alleging such a cause are not often received, for the reason that this inflammation is almost invariably venereal in origin. If the urethritis follows an injury to the urethra, partial disability is explained under Rupture of the Male Urethra.

EFFECTS: If an individual has suffered from a urethritis, whether venereal in origin or not, all forms of insurance could be safely issued from three to six months after complete recovery, provided the moral hazard is taken into consideration. When a history of this disease is elicited a number of years previous, it is important to ascertain before issuing a life or health policy if a stricture exists, and if so, its extent and severity. Accident insurance would be issued as soon as recovery becomes complete, provided the moral hazard permits.

VARICOCELE

INFORMATION: A varicocele is an enlargement of the veins of the spermatic cord and is said to be caused by occupations that require the upright position, persistent constipation and is rarely accidental in origin, in such cases being due to a strain. It is more common on the left than on the right side.

SIGNS AND SYMPTOMS: When a varicocele exists, an irregular swelling is found on the posterior surface of the testicle

and this extends up the cord. It has been described as feeling like a "bag of earth-worms." This swelling becomes lessened when the individual is in a recumbent position, but increases when the upright position is assumed. Slight pain is sometimes complained of and in some cases a feeling of weight and soreness is present. Mental symptoms such as depression and hypochondria not uncommonly accompany this condition.

DIFFERENTIAL DIAGNOSIS: *Epididymitis* may sometimes be mistaken for this enlargement, but in the former there is severe pain and swelling of the testicle follows, while in a varicocele the condition is chronic and the testicle if involved at all, becomes atrophied.

Hernia of the Omentum when slight may be confused with a varicocele, but in this condition when the recumbent position is resumed the hernia may disappear entirely unless the protrusion has become adherent. Examination of the ring through which the cord passes would serve to make the diagnosis clear between a hernia and varicocele.

HOUSE CONFINEMENT does not exist when a varicocele is present unless the condition becomes acutely inflamed by injury or an operation is performed for its removal. If an injury is sustained and an inflammation follows, house confinement of 1 to 2 weeks may be necessary. If an operation is performed for the cure of this condition, from 1 to 2 or 3 weeks of house confinement are required; this time depending on the method of operation and the rapidity with which the tissues heal.

TOTAL DISABILITY is never present when a varicocele exists unless an injury causes an acute inflammation, or an operation for a radical cure is attempted. When an injury occurs, total disability of from 1 to 2 or 3 weeks may be required. If an operation is performed for the removal of the enlarged veins, total disability may last from 2 to 4 weeks, but this period would not be covered by an accident or disability policy if the operation was voluntarily undergone by the individual. If the veins had become inflamed for any reason other than venereal and disability resulted, an insurance company would be liable under an accident or health policy.

PARTIAL INDEMNITY FOR TOTAL DISABILITY is seldom deserved in this condition unless an operation has been undergone and recovery is slow, when from 1 to 3 weeks are usually sufficient.

EFFECTS: Individuals suffering with a slight varicocele that has not caused any mental impairment are generally considered insurable for all kinds of insurance without regard to this condition. If the veins are greatly enlarged, it is questionable if any form of insurance would be issued to such a person. When an operation has been performed for the cure of this condition, all forms of insurance can be safely granted from one to two months after complete recovery.

CHAPTER X

ACCIDENTS AND DISEASES OF THE UPPER EXTREMITY

PART I

INJURIES TO THE SOFT TISSUES

ABRASIONS AND CONTUSIONS OF THE SHOULDER AND ARM

INFORMATION: Abrasions located on the shoulder are usually sustained in conjunction with more violent injuries, and rarely cause disability unless complicated. Contusions occurring to this part of the body are caused by heavy blows received when in the upright position or when the body falls and the shoulder violently strikes the ground. Severe contusions are generally accompanied by sprains, fractures or dislocations involving the shoulder joint.

SIGNS AND SYMPTOMS: Abrasions are distinguished by the skin being broken and abraded in a number of places, and this is followed by bleeding and scabbing. Contusions produce swelling of the soft tissues surrounding the joint with more or less discoloration. Pain, tenderness and lessened use of the articulation follows severe contusions.

COMPLICATIONS are usual in severe contusions to this part of the body and consist of sprains, dislocations and fractures of some of the bones entering into the formation of the shoulder joint. When these complications exist, the period of disability is determined according to the complication; it being the most severe injury.

TOTAL DISABILITY should never be allowed for uncomplicated abrasions or contusions involving this part of the body, as they do not produce this form of disability in preferred risks. Ordinary risks are sometimes totally disabled from 2 to 5 days following a very severe contusion of the shoulder.

PARTIAL DISABILITY is not payable to ordinary risks after such an injury, but preferred risks may occasionally claim from 1 to 2 weeks of this disability.

EFFECTS: These injuries recover quickly and the individual is insurable for any form of policy as soon as evidence of the accident disappears.

INCISIONS AND LACERATIONS OF THE SHOULDER AND ARM

INFORMATION: Superficial incised wounds involving the shoulder or arm are due to contact with sharp instruments which cut the superficial tissues only. If the incision is deep and severs some of the muscles or the blood vessels and nerves that are found on the under and inner surface of the arm, total disability is greatly prolonged and permanent impairment of the function of the arm can result. Lacerated wounds usually involve the skin and underlying tissues of the shoulder and arm and are produced by any instrument with a blunt edge which partly cuts and lacerates the tissues with which it comes in contact. These wounds are often the result of injuries sustained in mills by contact with machinery.

SIGNS AND SYMPTOMS following incised or lacerated wounds are hemorrhage, separation of the wound edges which may be clearly cut or ragged, pain, swelling, and if some of the muscles have been severed, inability to move the arm in the direction controlled by the muscles involved. If a nerve has been cut the same result ensues, together with loss of sensation. Sometimes the shoulder joint is opened by an incised wound and this is followed by infection, suppuration and limited movement in the joint.

COMPLICATIONS: *Infection* is usual in lacerated wounds and almost invariably occurs in an incised wound which penetrates the joint cavity.

TOTAL DISABILITY following superficial or lacerated wounds involving the shoulder and arm in preferred risks may require from 3 to 7 days. In the same class, when the incision or laceration has been extensive, total disability lasts from 5 to 10 days. This time is increased about 1 week if infection occurs. Ordinary risks are not totally disabled from superficial incised or lacerated wounds unless a great number of them exist, when 1

week is generally sufficient. If the incision or laceration is extensive, such as produced by machinery, ordinary risks are usually totally disabled from 2 to 4 weeks, as infection is almost always present in these cases. When an operation is necessary for suturing the severed ends of the muscles together or tying important blood vessels, total disability in all classes of risks lasts from 2 to 4 weeks. If an important nerve of the arm is injured or divided, total disability is very uncertain and depends on the exact duties of the occupation, the physical condition of the individual and the rapidity with which repair of the nerve is accomplished by nature. Joint injuries resulting from deep incised wounds cause total disability of 3 to 6 weeks and sometimes longer in all classes of risks.

PARTIAL DISABILITY of 1 to 2 weeks is frequently deserved by preferred risks following deep incised or lacerated wounds of the arm or shoulder when the period of total disability has been short. Ordinary risks are not often entitled to any partial disability after this class of injuries. Incised or lacerated wounds that enter the shoulder joint or divide some of the important nerves of the arm may be followed by partial disability of 2 to 4 weeks; this depending, however, on the occupation, the location of the injury and the period of total disability which precedes it.

EFFECTS: Incised or lacerated wounds of the arm that are not sufficiently deep to badly injure the muscle, enter the shoulder joint or sever any of the blood vessels and nerves cause no permanent impairment of the function of the arm or shoulder, but leave scars which are covered by clothing. If permanent deformity or disability results from an injury of this character and is sufficiently severe to impair the functions of the arm and shoulder the individual is not insurable for accident insurance at any time, although a life or health policy may be safely written.

PUNCTURED WOUNDS OF THE SHOULDER AND ARM

INFORMATION: Punctured wounds involving the shoulder or arm result from any sharp-pointed instrument which is driven into this part of the body by force. Sometimes when the puncture is made by small instruments, such as needles, splinters, etc., a piece is broken off and remains in the tissues. Punctured wounds resulting from missiles propelled by gun powder cause widespread damage, involving the muscles and nerves,

and if a bone is struck, it is usually badly broken and splintered. Punctured wounds as the result of bullets generally push aside tendons and large arteries, but often wound the walls of the artery and later an aneurysm results or a secondary hemorrhage occurs.

SIGNS AND SYMPTOMS: Punctured wounds that are made by any kind of an instrument or missile are apparent to the naked eye and are followed by bleeding which is slight, unless an important blood vessel has been wounded, when the hemorrhage is severe. There is pain, swelling, and inflammation surrounding the puncture, and when made by a fire-arm which is held close to the body, powder marks are evident. This class of injuries due to fire-arms usually show the point of entrance smaller than the missile itself and the point of exit larger and ragged, with the surrounding tissues torn and contused. If the puncture has been due to a bullet which enters the shoulder joint or splinters the bones of the shoulder or arm, evidence of a fractured bone is apparent. Pain is slight when the puncture has been small, but when due to gunshot injuries it is severe and becomes much worse when complicated by an injury to the joint or a fracture of some of the bones. Infection almost invariably follows this class of injuries when suppuration ensues and greatly prolongs disability.

COMPLICATIONS: *Infection, Erysipelas or Tetanus* may complicate a punctured wound, when disability will be prolonged according to the time the complication requires for recovery.

TOTAL DISABILITY is seldom payable to any class of risks when the puncture is made by a sharp-pointed instrument and involves the soft tissues of the shoulder or arm and is not followed by infection or other complication. If the puncture is due to a gunshot injury and involves the soft tissues only, total disability lasts from 1 to 2 weeks in preferred and from 2 to 3 weeks in ordinary risks. Punctured wounds due to gunshot injuries which fracture the bones or enter the joints, produce total disability of 6 to 10 weeks in all classes of risks. If an operation is necessary following this kind of injury, total disability may last from 6 to 12 weeks. Suppuration in any of the above wounds generally prolongs disability from 1 to 3 weeks, depending on the severity of the infection, the depth of the wound and the location.

PARTIAL DISABILITY is not deserved in any class of risks following ordinary, uncomplicated punctured wounds involving the soft tissues only. When the puncture is due to a gunshot wound which injures the shoulder joint or shatters a bone, partial

disability of 2 to 6 or 12 weeks may be necessary in preferred risks. If the injury has been so severe that permanent deformity is the result, partial disability for the full length of the policy may be claimed by the injured party.

EFFECTS: A scar always remains from a punctured wound, and if a joint has been entered or a bone fractured, more or less permanent deformity and disability ensues. If impaired motion follows and is not sufficient to prevent the individual from protecting himself in an emergency, any kind of a policy may be issued three months after recovery.

BURNS AND SCALDS OF THE SHOULDER AND ARM

INFORMATION: Burns or scalds of the shoulder and arm may result from contact with hot metals, boiling liquids,

Fig. 43.—Deep burns of the right shoulder, forearm, and right buttock. (Keen's surgery).

steam, acids or dry heat. These parts are usually protected by clothing, consequently the burn is frequently severe, the clothing preventing ready access to the destructive agent for the quick removal of the cause.

SIGNS AND SYMPTOMS depend on the cause of the burn or scald. In all cases, however, there is intense pain, swelling and redness surrounding the burn and shock which may be out of all proportion to the size of the burn. Scalds produce blisters or destruction of the tissue when the parts are exposed to heat long enough. Hot metals may blister the parts, and if in contact for any length of time, carbonization results.

COMPLICATIONS: *Infection or Erysipelas* are the usual complications following a burn or scald and manifest themselves by signs and symptoms peculiar to each affection.

TOTAL DISABILITY should not be allowed to any class of risks when the burn or scald has been superficial and does not occupy a large area. Moderately severe and deep burns or scalds to these parts usually require from 1 to 3 weeks of total disability in all classes of risks; this time depending on the exact duties of the occupation and the area of tissue destroyed. If much sloughing takes place, this disability is prolonged 2 to 4 weeks. Severe burns which involve a large area and require skin grafting, cause total disability of 6 to 12 weeks or more in all risks.

PARTIAL DISABILITY: When a burn or scald involves the inner surface of the arm and occurs in preferred risks whose duties require much movement of the arm, partial disability of 1 to 3 weeks is sometimes necessary. Ordinary risks are seldom partially disabled, for the reason that they do not resume work until entirely recovered.

EFFECTS: Superficial burns or scalds leave no scars, but deep ones leave scars which contract and produce deformity and sometimes permanent impairment of motion; unless movement is greatly interfered with, the individual is insurable for any form of policy from three to six months after complete recovery.

ABRASIONS AND CONTUSIONS OF THE ELBOW AND FOREARM

INFORMATION: Abrasions and contusions of the forearm are not infrequent, but in almost every case there are other and more severe injuries involving some other part of the body. The forearm is one of the selected spots for the production of self-inflicted abrasions and any case suffering from an abrasion of the forearm without other injuries should be closely investigated; even though an abrasion and contusion exist together, the contu-

sion could be as easily produced as the abrasion. Fraudulent claimants often select this part of the body for producing these injuries, because the parts are accessible for self injury and when once inflicted they can be covered up and cause no actual disability.

SIGNS AND SYMPTOMS are the same as such injuries would produce in any other part of the body.

DIFFERENTIAL DIAGNOSIS: Abrasions of the forearm that are produced intentionally are usually the result of scratching with the finger nails, rubbing sand paper along the forearm or confining croton oil against the skin, any of these means produring an irritation and inflammation. Abrasions when self-inflicted are generally confined to a single area on the flexor surface of the forearm, are connected one with the other and the surfaces are evenly abraded; while abrasions which are the result of accidents show the abraded surfaces scattered over the forearm with some parts deeply gashed and others superficial, and are almost invariably found on the posterior surface. If the abrasion is intentionally inflicted, a discoloration may exist and is not the result of a blow, as it can be produced by the injection of the tincture of iodine or permanganate of potash under the skin; but in such cases there is always evidence of a small puncture made by the needle of the syringe. Discoloration following an accidental injury is usually more widespread and is not so marked in one place as that produced by injection of iodine or permanganate of potash.

COMPLICATIONS: *Abrasions* that are produced intentionally or occur accidentally are sometimes poisoned as the best means of prolonging disability, and this is especially true concerning this part of the body. Laborers who are suffering from abrasions of the forearm sometimes place a copper cent in vinegar until it has become corroded, and then bind this against the abrasion. When an attempt is thus made to prolong disability, evidence of a violent infection at one point of the abrasion is apparent and would serve to excite suspicion that such a means had been resorted to for lengthening the period of disability.

TOTAL DISABILITY following abrasions and slight contusions of the forearm when no other injury exists should not be allowed in any class of risks. Ordinary risks are sometimes entitled to 3 to 7 days of total disability following a very severe contusion of the forearm.

PARTIAL DISABILITY of 1 to 2 weeks may be necessary in severe contusions of the forearm which occur in individuals whose occupation requires much use of the arm and hand. Ordinary risks are not entitled to this form of disability.

EFFECTS: Abrasions and contusions recover quickly and no permanent impairment remains.

INCISIONS AND LACERATIONS OF THE ELBOW AND FOREARM

INFORMATION: Incisions involving the forearm are frequent and are caused by any sharp instrument. Lacerated wounds are usually due to the hand and forearm being caught between two hard substances, with the resulting tear of the skin and subcutaneous tissue. Self-inflicted incised wounds are sometimes seen involving the forearm. Such incisions are generally long and superficial, being not more than scratches made by a sharp instrument and which cause little pain and no disability. They run obliquely across the left forearm when the malingerer is right handed and vice versa, extending from the external and lower part to the upper and internal surface of the forearm. Lacerations when produced by machinery or other violent means are generally very extensive and are often accompanied by other wounds to different parts of the body.

SIGNS AND SYMPTOMS: A cleanly cut incision shows separation of the wound edges, while those of a lacerated wound are torn and ragged. Incised wounds may sever some of the blood vessels or nerves of the forearm, in which case there is extensive hemorrhage and loss of power beyond the point of injury. Pain is always felt and shock may be present in deep incised wounds or badly lacerated ones. Infection more commonly follows lacerated wounds.

TOTAL DISABILITY lasts from 5 to 10 days in preferred risks following deep incised wounds which do not involve the joint. Severe lacerated wounds of the soft tissue only cause total disability of 1 to 3 weeks in all classes of risks. When an incision or laceration is severe and involves either the elbow or wrist joint, total disability in all classes of risks may last from 3 to 6 or 8 weeks, depending on the severity of the incision or laceration and the resulting infection which follows to the joint.

PARTIAL DISABILITY of 1 to 2 weeks is claimed by pre-

ferred risks following incised or lacerated wounds which do not involve a joint; if this complication is present, partial disability of 2 to 4 weeks may be demanded. Ordinary risks are not often entitled to this form of disability; if so, from 1 to 2 weeks are generally sufficient.

EFFECTS: If the incision or laceration has not been so severe as to sever some of the tendons or nerves of the forearm, the wound heals with a resulting scar only. Should tendons or nerves be divided, loss of power in the hands or fingers may result; in which case disability is prolonged. Unless much impairment of motion remains, the individual is insurable for any kind of a policy after recovery is complete.

PUNCTURED WOUNDS OF THE ELBOW AND FOREARM

INFORMATION: Punctured wounds involving the forearm or elbow joint may be the result of sharp-pointed instruments or missiles propelled by gun powder. If due to pointed weapons that have a sharpened edge, some of the tendons of the forearm may be severed as the instrument enters or is extracted from the arm. When the punctured wound is due to a gunshot injury, the radius or ulna may be shattered or the elbow joint may be badly injured. Punctured wounds from pointed instruments, unless entering a joint, seldom cause any permanent disability, while the same class of wounds by bullets usually cause permanent deformity and disability when the missile comes in contact with one of the bones or enters the elbow joint.

SIGNS AND SYMPTOMS following small punctured wounds from knife blades, nails, splinters, etc., which involve the soft tissues of the forearm only are pain, slight bleeding, swelling and generally suppuration. If the instrument has a sharp edge and some of the tendons have been severed, absence of flexion or extension of the hand or fingers may be evident. Following a puncture due to gunshot injury, there is shock which may be severe and this is especially true if the bullet wounds any of the arteries, nerves or bones of the forearm. Bleeding, with pain, tenderness, swelling and evidence of the puncture is seen. If either of the bones is fractured, a false joint with crepitation results, and if the bones entering into the formation of the elbow joint are injured, there is loss of motion in this articulation with crepi-

tation between the fractured ends of the bones and in some cases synovial fluid can be detected as coming from the joint.

COMPLICATIONS: *Infection* usually follows a punctured wound unless it is very shallow and can be easily cleaned immediately following its infliction. If the instrument or missile enters the elbow joint, infection is almost sure to ensue and prolong disability in addition to causing more or less permanent impairment of motion in this articulation.

Fractured Bones as the result of gunshot injuries are usual in this part of the body, and if the upper extremity of the radius or ulna or the lower end of the humerus is injured, infection almost invariably follows, and when recovery ensues, impairment of motion of this joint results.

TOTAL DISABILITY in preferred risks when the puncture has been made by a pointed instrument and no tendons have been severed, lasts from 2 to 7 days. Ordinary risks seldom demand any total disability for small punctured wounds. If the instrument making the puncture has cut any of the tendons of the forearm and is followed by infection, total disability in preferred risks lasts from 2 to 4 weeks, when the injury has occurred to the right forearm. In the same class, if the injury is to the left forearm and the individual is right handed, total disability lasts from 1 to 2 weeks, unless the occupation requires constant use of both arms, when total disability is, as above stated, for preferred risks. Ordinary risks require from 3 to 5 weeks of total disability following these injuries. Punctured wounds of the forearm from gunshot missiles that do not injure the bones, tendons or joints require the same length of time in all classes of risks as simple punctured wounds which become infected. Gunshot wounds which fracture one or both bones of the forearm or sever some of the tendons cause total disability of 3 to 6 or 8 weeks in preferred risks when the injury occurs to the right forearm and the individual is right handed. If the duties of the occupation are clerical and the injury occurs to the left forearm, total disability usually lasts from 1 to 3 weeks only in preferred risks. In ordinary risks, total disability lasts from 3 to 6 weeks in this class of injuries to either one of the forearms. Preferred risks who require the use of both arms in the occupation and who suffer from a gunshot wound of the right elbow, require from 6 to 10 weeks of total disability. If the duties are office and supervising, from 3 to 6 weeks of total disability are generally sufficient, when

the injury occurs to the left elbow and the claimant is right-handed. Ordinary risks suffering from a gunshot injury to the elbow joint require from 6 to 12 weeks of total disability and sometimes a longer period is necessary.

PARTIAL DISABILITY of 1 to 2 weeks in preferred risks suffering from a simple punctured wound of the forearm is sometimes demanded. If the instrument which penetrates the forearm severs some of the tendons, partial disability of 2 to 4 weeks is often payable to preferred risks. Gunshot wounds which fracture either of the bones of the forearm in preferred risks require from 2 to 4 weeks of partial disability. If the fractured bones enter into the formation of the elbow joint, from 4 to 8 weeks or more may be necessary. Preferred risks suffering from gunshot wounds of the forearm in which total disability has been short, usually require from 2 to 4 weeks of partial disability. Ordinary risks are not often entitled to any partial disability following punctured wounds of any character to the forearm.

EFFECTS: Ordinary punctured wounds that are uncomplicated except by infection, and which do not involve a joint, leave no permanent deformity. If the puncture has severed some of the tendons of the forearm and these have not been properly sutured together, some impairment of flexion or extension of the hand or fingers may be present, but motion usually returns in time. Should the puncture have been due to a gunshot injury and fractured the radius or ulna, there may be permanent deformity and some temporary weakness immediately following the injury. This disappears, however, and the arm becomes as strong as ever, even though slightly deformed. If the elbow joint is involved, deformity and more or less impairment of motion almost invariably results. If this is not so great as to prevent the individual from gaining his livelihood or taking care of himself in an emergency, any form of insurance may be written from three to six months after complete recovery.

BURNS AND SCALDS OF THE ELBOW AND FOREARM

INFORMATION: Burns and scalds of the elbow and forearm are frequent to risks who work with the sleeves rolled up and are caused by the accidental application of heat in various forms to this part of the body. This class of injuries when superficial cause little, if any disability, but when severe, disability is

greatly prolonged and deformity with permanent impairment of motion usually results.

SIGNS AND SYMPTOMS: Immediately following a burn or scald there is pain, tenderness, swelling, redness, and if the heat is intense, blisters or destruction of the tissues results. Suppuration is usual in this class of burns and prolongs disability.

DIFFERENTIAL DIAGNOSIS: *Pemphigus* is a disease commonly found on the limbs and is characterized by blisters

Fig. 44.—Pemphigus in a negress aged thirty-one, of two months' duration, showing the fresh, tense, and older flaccid blebs on upper arm; eruption general. (Stelwagon).

which form in crops with no area of inflammation surrounding them. These blebs varying in number from six to twelve, from small spots to several inches in diameter, and are accompanied by slight itching and burning. When this disease has existed for some time, it resembles a superficial scald.

TOTAL DISABILITY following slight burns or scalds of the elbow or forearm cause little if any disability in preferred risks. Moderately severe burns in this location require from 1 to 2 weeks in this class of risks, if the injury is to the right forearm and the individual is right-handed. When the burn occurs to the left forearm under the same conditions, total disability lasts from 3 to 7 days only. Severe burns in which a large surface of skin and some of the underlying tissue have been destroyed, require from 3 to 6 weeks of this disability in preferred risks when the

injury occurs to the right forearm. If to the left forearm under these conditions, total disability lasts from 1 to 3 weeks. Ordinary risks seldom require any total disability for slight burns. Moderately severe burns require from 3 to 7 days and severe ones from 2 to 3 weeks. If skin grafting is necessary in this class of risks, the primary period of total disability is generally long and is increased 2 to 3 weeks for each skin grafting operation.

PARTIAL DISABILITY lasts from 1 to 4 weeks in preferred risks, according to the location of the burn, its severity, complication and the exact duties of the occupation. Some individuals insured under an ordinary classification require from 1 to 2 weeks of partial disability.

EFFECTS: Severe burns or scalds of the elbow or forearm that are deep enough to involve the tendons or nerves of the extremity cause permanent deformity and disability. The tendons of the forearm may be bound together by adhesions and thus cause limited motion in the hand or fingers. If a considerable area of skin with the underlying tissue on the flexor surface of the elbow is destroyed, an ugly scar which contracts in time results and may produce permanent partial flexion of this joint. As the scar grows older, it becomes harder and is continually split open by unintentional efforts on the part of the individual to extend the arm, causing a more or less open abrasion on the anterior surface of this joint at all times. Individuals who have suffered from severe injuries to this part of the extremity which have recovered without much permanent deformity or disability, are insurable for any kind of a policy from three to six months after recovery.

ABRASIONS AND CONTUSIONS OF THE WRIST, HAND AND FINGERS

INFORMATION: Abrasions of the wrists, hands or fingers cause total or partial disability when the injury is confined to this part of the body, and in certain occupations, such as bookkeepers, telegraph operators, stenographers, clerks, etc.; while contusions to these parts, unless extremely severe, seldom cause total disability in any class of risks. Injuries that are more than contusions, such as a mashed finger or hand in which the skin is not broken, cause total and partial disability in all classes of risks. Abrasions of the hands and fingers are usually the result of falls and are

caused by sliding of the hands along the ground or on some hard substance. Severe contusions are produced by the fingers or hand being caught between two hard objects and badly squeezed and mashed. Some contusions are not received accidentally, such as the swollen discolored hands of a base-ball catcher, who is not insurable for an accident policy.

SIGNS AND SYMPTOMS: Abrasions present the characteristic evidence of broken skin with bleeding, swelling, and later the formation of scabs. Infection of these superficial wounds frequently follows abrasions of the hands or fingers. Contusions result in swelling, discoloration, stiffening of the joints of the wrists, hands or fingers, and if the contusion has been severe and involved the ends of the fingers or thumb, discoloration appears under the nail and persists for a great length of time, in addition the nail is often discarded as a result of these injuries. Pain and tenderness follow abrasions and contusions and are especially severe on movement when the injury involves the fingers.

COMPLICATIONS: *Infection* is one of the most frequent results of an abrasion to the hand or fingers, but generally it does not prolong disability unless the abrasion is very extensive and involves a large area.

A Palmer Abscess sometimes follows a severe contusion of the hand, but this is most often due to prolonged and frequent use of the palm against a pick handle or some other instrument in which a constant gripping and pressing of the hand against a hard object is necessary. If an abscess in this locality results there is great swelling of the hand, which is more pronounced on the palm, and accompanied by intense pain and high fever. An operation is always imperative in these cases and disability is thus greatly prolonged.

TOTAL DISABILITY following extensive abrasions of the hand or fingers lasts from 3 to 7 days in individuals whose occupation requires the constant use of the fingers or hand, such as telegraph operators, clerks, etc. Contusions of the hand or fingers seldom produce total disability, unless the injury is more than a contusion and causes a severe mashing without breaking the skin, when total disability in preferred risks who require constant use of the hands in the occupation, lasts from 5 to 10 days. Ordinary risks are seldom entitled to total disability for any abrasion or contusion of this part of the body, unless it can be clearly shown

that a palmer abscess resulted from an accidental contusion; in which case total disability lasts from 2 to 4 weeks.

PARTIAL DISABILITY in preferred risks when the injury occurs to the right hand and the individual is right-handed, lasts from 3 to 7 days as the result of an abrasion, and from 1 to 3 weeks when a severe contusion has occurred. Infection sometimes prolongs this period of partial disability, though rarely. Ordinary risks are not entitled to any partial disability following this class of injuries to this part of the body.

EFFECTS: Abrasions heal without any noticeable scar, and unless the contusion has been so severe as to cause the loss of a nail, no permanent marks remain and the individual is insurable for any kind of a policy as soon as recovery is complete.

INCISIONS AND LACERATIONS OF THE WRISTS, HANDS OR FINGERS

INFORMATION: Incised wounds of the wrists, hands or fingers are very frequent and superficial, and seldom cause any disability unless the cut has severed some of the tendons, when total and partial disability ensue. Lacerations to this part of the body occur more often in ordinary risks than in those of the preferred class. Lacerated wounds as the result of injuries by machinery and crushing between hard substances are usually very much contused and on account of foreign bodies being ground into these surfaces, infection almost invariably follows and disability is greatly prolonged by this and also by the severe mashing of the parts which occur in these injuries. Mutilation of the hands or fingers by chopping off the end of a finger or thumb is sometimes practiced by individuals who carry a number of accident policies. This is especially true when the policy pays a specified sum for the loss of a finger or hand.

Fig. 45.—Contractions following severe lacerations of the hand. (Eisendrath).

In these self-inflicted cases, the individual generally selects the left hand for mutilation and at a time when no one is present.

SIGNS AND SYMPTOMS are pain and hemorrhage with cleanly cut surfaces in incised and torn and ragged ones in lacerated wounds. If any of the tendons have been severed, loss of function follows in the muscle involved. When a nerve has been divided, paralysis or loss of sensation exists beyond the point of injury.

DIFFERENTIAL DIAGNOSIS: Incised or lacerated wounds involving the wrists, hands or fingers are easily diagnosed, but the question as to whether the injury is received accidentally or self-inflicted is sometimes extremely difficult. Accidents that result in these injuries occur to individuals during the course of the day's labor and are usually witnessed by co-employees or friends. When the injury is self-inflicted it is more often claimed that it occurred on the train or trolley, in order that double indemnity may be payable. If this is not attempted, the malingerer states that the injury occurred at night or when no one was present, and almost invariably the left hand is the one selected, unless the individual is naturally left-handed. Examination of the other hand or the toes of both feet in these cases usually shows some loss of the parts which have most probably been self-inflicted previously. Such persons deny having any other accident insurance, but investigation always discloses the fact that the individual is insured by a number of companies.

COMPLICATIONS: *Infection or Tetanus* may supervene and complicate any incised or lacerated wound, and infection is almost invariably present following a lacerated wound of the hand or fingers.

TOTAL DISABILITY: Incised or lacerated wounds of the wrists, hands or fingers which do not sever any of the tendons and occur in preferred risks who are right handed and whose duties require constant use of the hands may last from 3 to 10 days; under the same conditions when the injury is to the left hand, total disability is rarely deserved. If a tendon has been severed or a joint opened and infected, total disability in preferred risks such as stenographers, telegraph operators, etc., lasts from 3 to 6 weeks. If the duties are office only and the injury occurs to the left hand, total disability lasts from 3 to 7 days. Ordinary risks are totally disabled by deep incised or lacerated wounds

from 1 to 3 weeks, according to the duties of the occupation and the location of the injury.

PARTIAL DISABILITY of 1 to 2 or 3 weeks follows in preferred risks who suffer from an incised or lacerated wound involving these parts; ordinary risks are seldom entitled to any partial disability.

EFFECTS: These injuries heal and leave a scar which is more or less prominent according to the severity of the injury. If a tendon has not been severed or an infection of the joint occurred, there is no resulting deformity or disability, and even if a condition such as a stiff joint or loss of flexion or extension in one of the fingers or thumb follows, the individual is insurable for any kind of a policy as soon as recovery is complete. On account of the frequent use of the hand and fingers, stiffening or loss of motion in the fingers or thumb generally improves in time.

PUNCTURED WOUNDS OF THE WRISTS, HANDS OR FINGERS

INFORMATION: Punctured wounds involving the fingers, hands or wrists are frequent and are due to splinters, sharp-pointed instruments and missiles from fire-arms. Bites from animals or insects are punctured wounds, and disability resulting from such is covered by an accident policy; but in these cases the claimant must know when the puncture was made, and this is especially true if it is claimed as the result of an insect bite. An individual who awakes in the morning with a small swelling on the hand or fingers and thinks it is due to an insect bite received during the night, is not entitled to indemnity under an accident policy, for the reason that he does not know positively the cause of the swelling; he merely thinks that it was due to an injury, but cannot be sure of it. Punctured wounds unless due to bullets, seldom injure any of the bones, but may enter the joints and cause an infection. Small punctured wounds to the soft tissues only rarely cause disability in any class of risks; when the puncture is deep and involves a joint, and this is followed by infection, total and partial disability ensue, but this depends on the location of the wound and the occupation of the individual. Gunshot injuries to the wrists, hands or fingers are very destructive and are usually complicated by a fracture of some of the bones, infection of a joint or the severance of tendons. Fraudulent claimants some-

times mutilate themselves by shooting off the end of a finger or a thumb for the purpose of receiving indemnity under a number of insurance policies.

Fig. 46.—X-ray of gunshot wound of hand showing bullet embedded on metacarpal bone of thumb. (Eisendrath).

SIGNS AND SYMPTOMS are an opening in the skin, which is plainly evident and which may contain a part of the substance causing the puncture. Pain, swelling and bleeding follow, and if the puncture is due to a gunshot injury and involves a joint, loss of motion results; some shock follows punctured wounds when caused by firearms, and if the instrument is held close enough to the skin, powder burns with particles of powder are imbedded in the tissues.

DIFFERENTIAL DIAGNOSIS: *Punctured Wounds* involving the hand or fingers when self-inflicted by fire-arms injure the extremity which is least used and at a time when witnesses are not

present and under peculiar circumstances that are hard to explain if the claimant is properly and closely questioned. These individuals seldom tell the same story as to the exact cause of the injury, and in addition have a history of being of little use to the community in which they reside.

COMPLICATIONS: *Infection* almost invariably follows a punctured wound to this part of the body and prolongs disability according to the location of the injury and the degree of infection.

Tetanus may complicate any punctured wound, and this is especially true when the puncture has occurred in the street or in a barnyard and is made by a nail or other sharp instrument in use in such a place. This disease frequently follows a punctured wound as the result of the discharge of a blank cartridge when held in close proximity to the injured part.

TOTAL DISABILITY depends on the occupation of the individual, the location of the injury, the cause and the complication. Simple punctured wounds when made by sharp pointed instruments in the soft tissues of wrist, hand, thumb or fingers seldom cause total disability, unless the individual is a musician, machine typesetter, telegraph operator, etc., when from 3 to 7 days may be necessary. If the puncture enters one of the numerous joints and is followed by infection, total disability in preferred risks lasts from 1 to 3 weeks, according to the location of the puncture and the exact duties of the individual. Gunshot wounds involving the wrist, hand, thumb or fingers in preferred risks requiring the constant use of the right arm and hand, cause total disability of 4 to 6 weeks. Preferred risks whose duties are office and supervising require from 1 to 2 weeks of total disability for these injuries. Ordinary risks rarely demand this form of disability for simple punctured wounds. When the injury involves a joint, total disability lasts from 2 to 4 weeks. If the puncture is due to a gunshot injury, from 4 to 6 or 8 weeks are necessary before the occupation can be resumed. Preferred and ordinary risks suffering from animal, insect or human bites are usually disabled the same length of time as from a punctured wound that is badly infected.

PARTIAL DISABILITY following simple punctured wounds sustained by preferred risks sometimes requires from 5 to 10 days. If the puncture has involved a joint and occurred to the left hand of a preferred risk, partial disability of 1 to 3 weeks may be necessary. Gunshot injuries in this class of risks require

from 2 to 4 or 6 weeks when the puncture occurs to the left hand, and not as long when to the right. Partial disability of 1 to 3 weeks is generally payable to preferred risks suffering from animal, insect or human bites. Ordinary risks seldom ask for partial disability following any character of punctured wounds.

EFFECTS: Simple punctured wounds heal readily and leave a small scar. Badly infected wounds and those which may involve a joint, sometimes leave impaired motion in the affected articulation. Gunshot wounds always leave unsightly, depressed scars and a certain amount of impairment of motion and deformity. Motion in the hand or fingers usually becomes practically normal in time even after a severe punctured wound; the individual therefore is insurable for any kind of insurance as soon as recovery is complete.

BURNS AND SCALDS OF THE WRISTS, HANDS OR FINGERS

INFORMATION: The fingers, hands and wrists together with the face and neck being the most exposed parts of the body most frequently suffer from burns or scalds which may be of any degree of severity, from the most slight and superficial to very severe ones that are very destructive and leave permanent deformity and disability. They are caused by wet or dry heat coming in violent contact with these parts and total and partial disability often results from what is apparently only a trivial burn or scald.

SIGNS AND SYMPTOMS are swelling with redness, pain and frequently blisters, and when the burn is produced by prolonged contact with hot metals, the parts are carbonized; infection almost invariably follows these burns or scalds and in many cases sloughing also occurs. Loss of motion is present when the burn has been severe and sometimes the tendons are exposed.

TOTAL DISABILITY: Preferred risks whose duties require constant use of the hands or fingers require from 1 to 2 weeks in slight burns or scalds; from 2 to 3 weeks in moderately severe ones, and from 3 to 6 weeks when the burn has been exceedingly severe. If the duties are office and supervising in the same class and the injury occurs to the left hand, from 1 to 5 days are generally sufficient in burns or scalds of all degrees of severity. Ordinary risks are totally disabled from 5 to 10 days fol-

lowing slight burns of the hands which involve a considerable area. If a burn or scald is moderately severe, from 2 to 3 weeks are required, and when the injury is very severe, total disability may be greatly prolonged; from 4 to 6 weeks, however, is the usual time. If an operation for skin grafting is necessary in any of these cases, it prolongs total disability from 2 to 3 weeks for each time that it is performed.

PARTIAL DISABILITY of 1 to 2 weeks is payable to preferred risks when the duties require constant use of the hands or fingers, and from 1 to 3 weeks in the same class when the occupation is office and supervising. Partial disability of 1 to 2 weeks is sometimes payable to ordinary risks.

EFFECTS: Slight burns or scalds involving the wrists, hands, fingers or thumbs may leave scars that are more or less noticeable. Severe burns or scalds are always followed by scars which contract and usually produce impairment of motion. If the burn has been extremely severe and the deep tissues have been destroyed, scars and deformity are marked and impaired movement is permanent. Unless this impairment is so pronounced that the individual is unable to protect himself in an emergency, insurance of all kinds can be written as soon as recovery is complete.

PALMER ABSCESS

INFORMATION: An abscess involving the hand is frequently due to traumatism to the palm, although an injury to either of the fingers and especially the little finger and the thumb may be followed by suppurative thecitis and a palmer abscess. A palmer abscess is generally seen in laboring men and most commonly results from repeated contusions to the palm of the hand, such as would occur when a workman is constantly striking or pushing his palm against a hard substance. Base ball players are subject to these abscesses which are produced by the ball continually pounding the anterior surface of the hand. Unless an abscess of this kind is promptly and properly

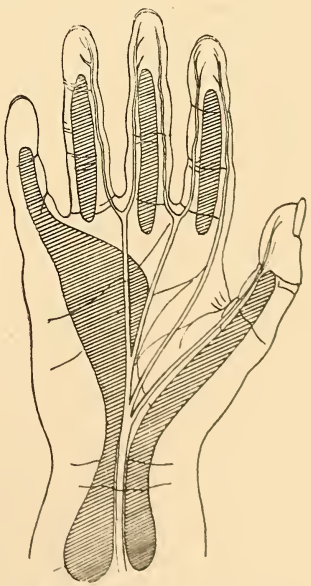


Fig. 47.—Diagram of tendon-sheaths of the hand. (Tillaux).

treated by free incisions, disability is greatly prolonged and permanent deformity and loss of motion may result.

SIGNS AND SYMPTOMS are swelling of the palm which becomes greatly puffed out, followed by redness and excruciating pain which is worse when the hand is in the dependent position; high fever, loss of appetite and inability to sleep are always present.

COMPLICATIONS: If the abscess is not opened promptly by deep incisions, pus burrows under the palmer fascia and extends up the forearm. Sloughing of the flexor tendons and sometimes the extensors occurs; necrosis of the carpal bones of the hand results when the abscess is only confined a comparatively short time.

TOTAL DISABILITY: As this condition almost invariably occurs in the laboring classes or those who are insured as ordinary or more hazardous risks, total disability lasts from 3 to 6 weeks when the abscess has been freely opened in the early stages. If not so treated, these risks may be totally disabled for an uncertain length of time running from 4 to 6 or 8 weeks and often longer, depending on the amount of destruction of the tissues of the hands before the abscess is evacuated.

PARTIAL DISABILITY is not often deserved in this class of risks as the claimant is fully recovered before being able to resume any part of his occupation.

EFFECTS: A palmer abscess that has been opened early and has healed without any complications, causes no permanent deformity to the hand. If sloughing of the tendons occurs or necrosis of the carpal bones ensues, the individual is an impaired risk for accident insurance; the degree of impairment depending on the deformity and loss of function which is present in the hand. Such individuals are insurable for life or health policies as soon as recovery is complete, but the issuance of an accident policy would require that each case be considered separately.

PART II

INJURIES TO THE ARTICULATIONS OF THE UPPER EXTREMITIES

SPRAINS OF THE ACROMIO-CLAVICULAR AND SHOULDER JOINTS

INFORMATION: Sprains of the acromio-clavicular joint are rare and when they do occur are usually seen as complications involving a contusion, sprain or dislocation of the shoulder joint. This important ball-and-socket joint is not often sprained on account of its great range of motion, but sometimes a sprain results when the arm is caught and twisted by falls from a height on the extended arm and by direct force which causes the head of the humerus to be temporarily and partially displaced.

SIGNS AND SYMPTOMS: Immediately following a sprain of the shoulder joint there is intense pain accompanied by a feeling of weakness, sometimes nausea and vomiting, and when the injury has been severe, syncope may occur; swelling appears quickly and discoloration of the superficial tissues may result in a short time, although in the shoulder joint, discoloration is not marked until several days after the injury has been received. After a severe sprain, pain is increased by motion, tenderness is present over certain places and in a short time grating on movement is elicited.

DIFFERENTIAL DIAGNOSIS: *Acute Articular Rheumatism* may commence in the shoulder joint, and if the individual has had a slight fall, he may imagine that the joint has been injured. This disease produces uniform swelling, redness, no discoloration of skin over the joint, but a marked sense of heat, increased body temperature, excruciating pain on the slightest movement and tenderness which is present over the entire surface of the shoulder joint; as the disease advances other joints become affected, acid sweats occur and in marked cases anemia results. Sprains have a history of a severe injury followed by tenderness which appears in spots marking the tear of the ligaments or tissues surrounding the joint; swelling and

discoloration occur. The latter follows a sprain, while it is absent in a joint affected with rheumatism. Sprains produce no general increase of temperature and the tenderness surrounding the joint gradually becomes less as time passes and is not changed by weather conditions.

COMPLICATIONS: *Fractures and Dislocations* are sometimes present in an injury diagnosed as a sprain, but in the shoulder and acromio-clavicular articulations such an error seldom occurs.

Acute Synovitis invariably results when a sprain of the shoulder joint has been sustained and blood has been extravasated, but proper treatment prevents this inflammation becoming chronic. Should it become so, however, impairment of motion results and disability is prolonged.

TOTAL DISABILITY lasts from 3 to 7 days in preferred risks when a moderately severe sprain of the shoulder or acromio-clavicular articulations occurs. In the same class suffering from a severe sprain of either of these joints, accompanied by marked contusions of the surrounding tissues, total disability may last from 1 to 2 weeks. This is especially true in claimants whose occupation requires the constant use of the arms. Ordinary risks require from 1 to 3 weeks of this disability for sprains of these joints, the time depending on the severity of the injury and the duties of the occupation.

PARTIAL DISABILITY of 1 to 2 weeks is payable to preferred risks when the sprain has been moderately severe and the length of total disability has been short. In the same class of risks after a severe sprain has been sustained, when total disability has lasted from 1 to 2 weeks, it may be necessary to allow from 2 to 3 weeks of partial disability. Ordinary risks are not entitled to partial disability following this injury.

EFFECTS: Individuals who have suffered from a sprain of either of these joints are generally completely recovered in from two to three months from the date of accident, when insurance of all kinds can be safely written.

DISLOCATION OF THE ACROMIO-CLAVICULAR ARTICULATION

INFORMATION: The outer end of the clavicle articulates with a facet on the anterior surface of the acromion process of

the scapula and is held in place by a strong capsular ligament. When a dislocation involving this articulation occurs, the outer end of the clavicle is pushed above or below the acromion process, thus tearing and lacerating the upper or lower portion of the

FIG. 48.—DISLOCATION UPWARD OF THE ACROMIAL END OF THE CLAVICLE. (Eisendrath).

The arrow points to the depression lying between the bony prominence, caused by the separation of the acromial end of the clavicle from the acromion process of the scapula.

capsular ligament. This dislocation is rare and when seen is caused by violent direct force applied to the shoulder joint. After this ligament is once torn and lacerated, these dislocations are prone to recur on the slightest exertion or injury, unless the bones are wired in position.

SIGNS AND SYMPTOMS: A swelling over this joint is present and on palpation it is learned to be the outer end of the clavicle resting on the acromion process of the scapula; motion in the affected arm is impaired, it being impossible to raise the hand above the head. Apparent lengthening of the arm exists, the head is drawn towards the injured side, there is some pain, and shortly after the injury occurs, discoloration appears.

COMPLICATIONS: *Fractures of the Acromion Process* of the scapula and fractures of the clavicle sometimes complicate these dislocations; when present the usual signs and symptoms characteristic of the peculiar complication which exists are elicited; such complications prolong the disability.

TOTAL DISABILITY lasts from 2 to 4 weeks in preferred risks whose occupation requires the constant use of the arms and hands. In the same class when the duties are mainly directing, from 2 to 5 days are generally sufficient. Ordinary risks are totally disabled from 3 to 6 weeks following this injury.

PARTIAL DISABILITY of 1 to 3 weeks is usually demanded by preferred risks whose duties require much use of the arms; in the same class when the period of total disability has been short, partial disability of 2 to 4 weeks is generally necessary. Ordinary risks are not often entitled to partial disability.

EFFECTS: Dislocations of this joint are easily reduced, but the result is seldom satisfactory, the slightest injury or muscular action causing the dislocation to recur; unless the ends of the bone are held in position by wiring. If an operation has not been performed, such individuals are not insurable for an accident policy without a waiver eliminating indemnity for this disability. They would be insurable, however, for a life or health policy from one to two months after the date of injury.

DISLOCATION OF THE SHOULDER JOINT

INFORMATION: The anatomical position of the shoulder joint together with the form of the bones which enter into its formation, is such that luxations often take place. Dislocations involving this articulation are said to occur more frequently than dislocations involving all the other joints of the body combined. They are caused by direct force such as blows to the shoulder and by indirect force when a fall has been sustained on the extended hand and are more common in young muscular adults. Dislocations of the shoulder are divided into four classes, the sub-coracoid, sub-glenoid, sub-spinous and sub-clavicular; the first of which occurs in about three-fourths of the cases.

SIGNS AND SYMPTOMS: Immediately following a dislocation there is pain of a nauseating character, free perspiration and weakness which is often accompanied by fainting. On inspection an apparent projection is seen at the upper part of the joint which is the acromion process of the scapula, flattening of the shoulder, with a depression immediately under this projection, loss of movement in the affected arm and extensive swelling. On examination the head of the humerus is out of normal position and is found abnormally placed; the position determining the character of luxation. If the hand on the injured side is placed on the sound shoulder, the elbow will not touch the side of the chest. Discoloration which is very extensive and involves the whole shoulder and extends down the arm follows a dislocation of the head of this bone.

DIFFERENTIAL DIAGNOSIS: *Fractures* involving the surgical or anatomical neck of the humerus, the glenoid fossa or

neck of the glenoid process, the coracoid or the acromion processes, may be present in addition to a dislocation. When fractures of the surgical or anatomical neck of the humerus occur, there is crepitation on movement which is not present in a dislocation and the movement is more free than in a dislocation. If a fracture exists in this situation, it is easily reduced, but at once recurs. Dislocations are difficult of reduction, and when once returned to place remain in position. When fractures of the cora-

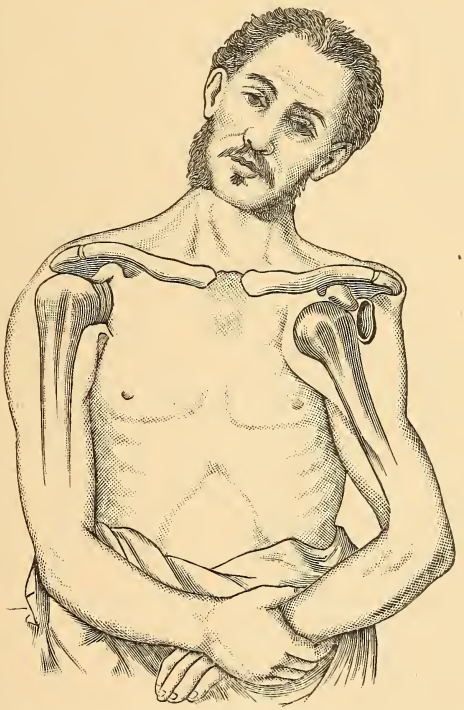


Fig. 49.—Subcoracoid dislocation of the humerus showing flattening of the shoulder, the position of the arm and forearm, and the position of the head of the humerus in relation to the other bony landmarks. (Hoffa).

coid or acromion processes occur, this part of the scapula is found resting on the head of the humerus and crepitation is present between the process and the scapula.

Paralysis of the Deltoid Muscle produces distinct flattening of the shoulder, but the head of the humerus is found in position and motion is somewhat impaired in the joint.

The X-rays should always be used in injuries of the shoulder joint, for the purpose of ascertaining the extent of the injury.

Many cases of dislocations are complicated by fractures of some parts of these bones which are very difficult of diagnosis without the rays. By using this method, a physician has a better conception of the injury and is thus able to give his patient the best treatment and also forestall any claim for damages for improper treatment, or be better prepared to defend himself in such a case.

COMPLICATIONS: *Injuries to Blood Vessels and Nerves.* As the head of the humerus breaks through the capsular ligament of the shoulder joint when a dislocation occurs and takes up its new position, laceration and tearing of the arteries, veins and nerves of the axilla follow. If the brachial artery is torn, absence of the radial pulse on the injured side is apparent and rapid extravasation of blood into the axilla follows, this extending down the inside of the arm and under the skin of the chest, producing signs of concealed hemorrhage, such as nausea and faintness, rapid, irregular pulse, etc. This collection of blood may become infected and result in an axillary abscess, when disability is prolonged, the time depending on the extent of the abscess and the physical condition of the individual. If some of the nerves have been injured, sensation in the parts supplied by the injured nerve is impaired or lost or motion is impossible.

Compound Dislocations or dislocations in which the soft tissues are so torn that an opening is established between the joint and the external surface are extremely rare. They may occur, however, when the violence has been so great that laceration of the soft tissues surrounding the shoulder joint is present, and when seen, disability is greatly prolonged and may even result in an amputation at the joint on account of the laceration accompanying the dislocation.

TOTAL DISABILITY lasts from 2 to 3 weeks in preferred risks who require the constant use of the arms; in the same class when the duties are office and supervising, this disability persists from 3 to 7 days only and is followed by a longer period of partial disability. Ordinary risks are totally disabled from 3 to 5 weeks following these dislocations. The above time of disability is for uncomplicated dislocations; should any complication occur, the length of disability depends on the character and severity of the complication.

PARTIAL DISABILITY in preferred risks, such as telegraph operators, stenographers, etc., requires from 1 to 2 weeks; in the same class when the period of total disability has been short

and the occupation is mostly directing, partial disability of 2 to 4 weeks is necessary. Ordinary risks are not usually entitled to any partial disability.

EFFECTS: Dislocations of the shoulder joint are prone to recur, and it is impossible to tell when the same condition may be again produced; therefore, an individual with a history of such an injury within one to two years would not be insurable for an accident policy unless a waiver was placed on it eliminating disability for this injury. Life and health insurance can be safely written on such a case at any time after recovery takes place.

SPRAINS OF THE ELBOW JOINT

INFORMATION: The elbow joint is a pure hinge-joint and receives its strength more from the shape of the bones than the ligaments which surround it and hold them in contact with each other. It consists of three separate, distinct articulations and is subject to sprains caused by falls on the extended hand, severe blows over the joint and by sudden twisting or forcible extension of the forearm. Sprains involving the elbow joint are usually complicated by a similar injury to the superior radio-ulna articulation or vice versa. One of the four ligaments helping to form the capsule may be torn, but the orbicular ligament which holds the head of the radius in contact with the lesser sigmoid cavity of the ulna is rarely lacerated, though it may be stretched and injured.

Fig. 50.—Tuberculous disease of the elbow, with the arm fixed at an obtuse angle. (Keen).

SIGNS AND SYMPTOMS are severe pain at the time the accident occurs; sometimes producing faintness, nausea or even vomiting. Swelling with discoloration, pain on movement and tenderness over

certain parts of the joint are present. On account of this joint not being covered by much tissue, discoloration is an early sign.

DIFFERENTIAL DIAGNOSIS: *Tuberculous Disease* of the elbow joint is most common in young adults, showing itself by a slow, pale fusiform swelling, slight pain, limited movement, and in the later stages, muscular wasting and dilitation of the veins.

COMPLICATIONS: *Temporary Dislocations or Fractures* of some parts of either the olecranon or coronoid processes may occur and not be known unless an x-ray examination is made. If small particles of bone are broken off, impaired motion in flexion or rotation may result.

Synovitis follows severe sprains to this joint and especially if there has been a complication, such as a fracture or a bad tear of any of the ligaments. If this inflammation becomes chronic, more or less impairment of motion results and ankylosis of the elbow joint proper or superior radio-ulna articulation may ensue and cause permanent disability and deformity.

Suppurative Arthritis may result in a tuberculous joint or be due to other causes, such as pyemia, septic injury, etc. If this complication arises, disability is greatly prolonged and is not covered by an accident policy, unless there is a straight history of an injury with evidence at the time the accident occurred and immediate and continuous disability.

TOTAL DISABILITY following sprains of any of the joints of the elbow in preferred risks who require the constant use of the hands, such as telegraph operators, etc., lasts from 7 to 10 days. In the same class of risks when the occupation is office and supervising, total disability should not be necessary for more than 2 to 5 days. Very severe sprains that are complicated by bad tears in the ligaments or fractures which are not diagnosed, cause total disability of 1 to 3 weeks in preferred risks if the individual requires the constant use of the hands. Ordinary risks are seldom totally disabled following slight sprains of this joint, but when severe, total disability may last from 1 to 3 weeks.

PARTIAL DISABILITY is the usual indemnity demanded for sprains involving this joint, and preferred risks who do not require constant use of the hands generally ask for 1 to 2 weeks. Preferred risks such as stenographers, etc., are entitled to 1 to 3 weeks of partial disability. Ordinary risks do not deserve any partial disability.

EFFECTS: Unless a sprain of this articulation has been complicated by a more severe injury and permanent deformity and disability result, the risk is insurable for any form of insurance from one to two months after complete recovery. If ankylosis exists and is not marked, it would have no bearing on the insurability for accident insurance; even if the forearm is ankylosed at right angles with the arm, the individual might be considered for this form of policy by some accident insurance companies.

DISLOCATION OF THE ELBOW JOINT

INFORMATION: Dislocations of the elbow joint are said to occur next in frequency to those involving the shoulder joint. These injuries are generally caused by falls on the extended arm

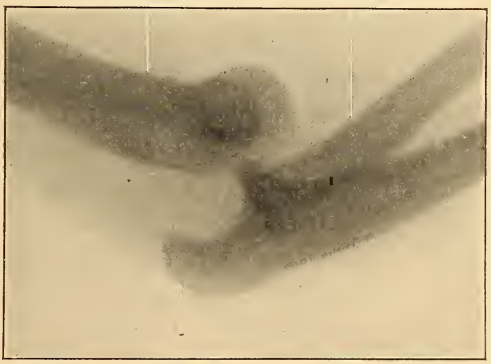


Fig. 51.—Dislocation of both bones of the forearm backward. (Scudder).

and hand and result in a great variety of dislocations; the most common of which is a displacement backwards of both bones of the forearm. The radius and ulna may also be displaced forward and to either side or each bone may be separately dislocated, the head of the radius being most often concerned in this injury. Direct force applied over the elbow, sudden twisting of the forearm and forcible elongation are also said to produce these dislocations. These injuries may be complicated by fractures of some of the processes entering into the formation of the joint, injury to the blood vessels and nerves and sometimes by an opening which may extend from the joint to the external surface.

SIGNS AND SYMPTOMS depend on the variety of dislocation. In all cases, however, there is much pain which produces weakness, profuse sweating and sometimes fainting at the time the accident is incurred; swelling quickly follows and marked discoloration of the tissues surrounds the elbow joint and extends up the arm and down the forearm; this appears within a short time. On examination it is ascertained the bones of the forearm are not in the normal position, being either placed posterior, anterior, internal or external to the lower end of the humerus. If only one bone is dislocated, it is found out of its usual habitat, while the other one is in its normal position. Function of the arm is lost, but slight motion may be present, flexion usually exists and shortening or lengthening of the forearm is present according to the character of the dislocation.

DIFFERENTIAL DIAGNOSIS: *Fractures* of some of the processes of the bones entering into the formation of the elbow joint are frequent as complications and in some cases are very difficult of diagnosis. When a fracture exists in conjunction with a dislocation, there are additional signs and symptoms that may indicate this condition. If the individual is thin, crepitation between the fragments can often be elicited, but the proper procedure for diagnosing these condition is the use of the x-ray, which should always be employed when a dislocation or even an apparently severe sprain of this joint exists. Any injury to the elbow joint may result in permanent deformity and disability, and therefore a surgeon should employ every means within his power for the proper detection of all injuries that may have been sustained. It is impossible in a number of cases to properly diagnose these conditions without the use of an anesthetic, and this, together with the x-rays should be used in practically all cases.

COMPLICATIONS: *Fractures of the Bones or Processes* entering into the formation of this joint are frequent. Some dislocations are more often complicated with fractures than others, and when this condition exists, disability is prolonged and is governed by the time applicable to the complication.

Blood Vessels and Nerves are almost invariably torn and injured when a dislocation of both bones of the forearm occur. These complications are not so common when a dislocation of the head of the radius only is present. If the ulnar nerve

is severely injured, paralysis of the forearm with loss of sensation may be present.

Ankylosis of a more or less degree generally follows a dislocation of this joint and is caused by an effusion of blood inside the synovial membrane, which results in adhesions being formed and the bones bound together, thus producing this condition.

TOTAL DISABILITY lasts from 2 to 4 weeks in preferred risks when the occupation requires daily use of the forearm. If the duties of the occupation do not require this use in the same class of risks, total disability generally lasts from 3 to 7 days only and is followed by a longer period of partial disability. Ordinary risks are totally disabled from 3 to 6 weeks as the result of this injury, when complications are not present.

PARTIAL DISABILITY of 1 to 2 weeks is usually necessary in preferred risks requiring much use of the hands in the occupation. When the duties are mainly directing, this partial disability lasts from 2 to 4 weeks. Ordinary risks are seldom entitled to any partial disability.

EFFECTS: Dislocations of the elbow joint leave impaired motion and a weakened arm which persists for months and sometimes years. If the impairment or deformity is not sufficient to produce disability, and the individual is not prevented from protecting himself if occasion requires, accident insurance can be safely written in the majority of cases from six to twelve months after the date of dislocation. There is no impairment for life or health insurance following this injury.

SPRAINS OF THE WRIST JOINT

INFORMATION: Sprains of this articulation are probably as frequently seen as are sprains involving any other joint of the body, and when a sprain is said to have occurred to the wrist joint, it means that the articulation between the lower end of the radius and ulna or the inferior radio-ulna articulation, the articulation between the lower end of the radius and ulna as a whole with the carpal bones—the radio-carpal articulation—or the articulation between the carpal bones and the bases of the meta-carpal bones,—the carpo-metacarpal articulation,—has been injured. These three articulations are so closely allied to each other that

a fall on the extended hand—which is the usual method of producing a sprain or a sudden twisting of the extremity—causes the injury to some parts of these joints; it is therefore impossible and impracticable to designate the particular articulation that is concerned in the sprain, the signs and symptoms being the same for all three, together with the length of total and partial disability.

SIGNS AND SYMPTOMS: Sprains of the wrist joint are most frequently caused by falls; therefore an abrasion of the palm or back of the hand usually accompanies this injury and is apparent. The individual complains of pain in the joint which is aggravated by movement, sometimes redness, which disappears within twenty-four hours and a pronounced swelling to be followed by echymosis. On examination, tenderness is complained of at different points surrounding the joint; these places indicating the tears in the ligaments and tissues.

DIFFERENTIAL DIAGNOSIS: *Acute Articular Rheumatism* may begin in this articulation and may be coincident with a fall, and this may cause a claimant to think that the disability is due to a sprain and not to rheumatism. The diagnosis is easily made, rheumatism produces much swelling accompanied by redness which persists during the time the joint is involved, increased local heat and tenderness which is not in spots as in a sprain; in addition there is an increased body temperature, acid sweats, and later, the disease affects other articulations.

Temporary Dislocations are often diagnosed as sprains. In these cases, the bones are dislocated by the injury and immediately return to position, when the history following indicates a sprain and is usually and properly diagnosed as such.

Fractures often complicate severe sprains of the wrist joint, and in many cases are not diagnosed unless the x-rays are used. Sprain or chip-fractures or fractures in which a ligament tears off a small particle of bone are frequent in this articulation, and so also are fractures of the carpal-bones, and usually this condition is not known unless the above means are used for the diagnosis. When a fracture exists, there is crepitation and unnatural movement at the point of injury, and the fact that use of the hand is absolutely denied from the time of the accident, while in a sprain movement is present. If any of these signs cannot be elicited, the x-rays must be employed before the proper diagnosis can be made.

Tuberculous Disease of this joint may be claimed as a sprain, but in this disease the swelling involves the joint and all the soft

tissues, it is spindle-shaped, no discoloration is present, impaired motion in the joint and those of the fingers exists and muscular atrophy of the forearm is marked.

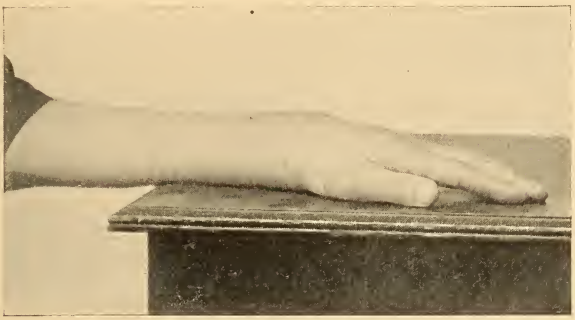


Fig. 52.—Tuberculosis of the Wrist. (Moore).

COMPLICATIONS: *Dislocations* and *Fractures* complicate these sprains and are described under Differential Diagnosis.

Ankylosis may follow an injury to the wrist joint, but it seldom does when only a sprain has occurred; it being more common after fractures or severe dislocations.

TOTAL DISABILITY lasts from 1 to 3 weeks in preferred risks who require the constant use of the hands; in the same class if the injury is to the left hand and the occupation is office and supervising, total disability is short and only lasts from 1 to 3 days. Ordinary risks require from 1 to 3 weeks of this disability before they can return to their work; this time depending on the severity of the sprain.

PARTIAL DISABILITY of 1 to 2 weeks is allowable to preferred risks following a sprain of either wrist without regard to the occupation. Ordinary risks are not entitled to partial disability.

EFFECTS: Sprains of this articulation are prone to recur, but as the cause is usually a fall, and this is not frequent, the individual is insurable for any kind of insurance from one to two months after recovery, and unless there is a history of repeated sprains to the wrist joint, a waiver eliminating indemnity for this injury would not be necessary on an accident policy.

DISLOCATION OF THE WRIST JOINT

INFORMATION: As in sprains involving the wrist joint, so also in dislocations of this joint, three articulations may

be concerned; one between the lower end of the radius and ulna,—the inferior radio-ulna articulation—one between these two bones as a whole, and the carpal bones themselves.—the radio-carpel articulation, and one between the carpal and metacarpal bones—the carpo-metacarpal articulation. The most common dislocation, however, is of the carpal bones forward or backward, the latter being the most frequently seen. These dislocations are usually due to falls on the palm of the hand or when the hand is flexed. Sometimes a dislocation may occur as the result of twisting or forcible extension.

SIGNS AND SYMPTOMS are pain and swelling which marks the position of the carpal bones either above or below the lower ends of the radius and ulna, loss of motion in the articulation and much discoloration. On examination, the bones are not found in position, movement of the hand causes excruciating pain, and if an upward dislocation of the carpal bones exist, they are found on the upper surface of the radius and ulna. The length between the elbow and tips of the fingers is shorter than in the arm of the opposite side.

DIFFERENTIAL DIAGNOSIS: *Colles' Fracture* at one time was considered to be a dislocation upward of the carpal bones

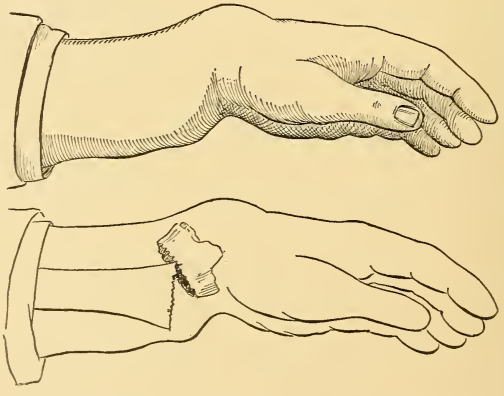


Fig. 53.—Deformity at the wrist consequent upon displacement backward of the lower fragment of the radius after fracture at its lower extremity. (Levis).

of the wrist, but of course is now known to be a transverse or oblique fracture of the lower end of the radius, and swelling

which it produces is known as the "silver-fork deformity." This fracture causes the hand to be adducted with some pronation. Crepitation is present and the styloid process of the radius does not occupy the same position in relation with the styloid process of the ulna as it does in a normal wrist. When a dislocation is reduced, it stays in position, while a fracture of this joint is especially prone to recur when reduced, unless pressure is contantly made over the seat of injury.

COMPLICATIONS: Stiffening of the wrist joint, with the same condition in the fingers and thumb may follow these dislocations, but this seldom becomes permanent.

TOTAL DISABILITY lasts from 2 to 4 weeks in preferred risks such as musicians, machine type setters, etc., in the same class when the duties are office and supervising, this form of disability usually lasts from 3 to 10 days only. Ordinary risks are totally disabled from 3 to 6 weeks, this time depending on the character of the dislocation and the amount of damage done to the ligaments at the time the bones get out of place.

PARTIAL DISABILITY lasts from 1 to 3 weeks in preferred risks in addition to the above; the length of time depending on the exact duties of the occupation. Ordinary risks are rarely entitled to any partial disability.

EFFECTS: When a wrist joint has once been dislocated, the same condition will recur with little force; therefore the joint is an impaired one and the individual is not insurable for accident insurance without a waiver eliminating indemnity from this injury, unless two or three years have passed after the date of accident, in which case the person is insurable for any kind of a policy.

SPRAINS OF THE HAND AND FINGERS

INFORMATION: Sprains involving the joints of the fingers or thumb are frequent and seldom cause total disability, while sprains of any of the joints of the hand are very uncommon. They are due to falls, blows, twists or any external violence which does not dislocate or fracture some of these bones.

SIGNS AND SYMPTOMS are pain on movement, tenderness surrounding the affected joint, slight redness which soon disappears, swelling, and later discoloration.

DIFFERENTIAL DIAGNOSIS: *Syphilitic Dactylitis* is usually seen involving one of the joints of the fingers and is characterized by a slow swelling which becomes much greater than in a sprain, absence of pain and a purplish red discoloration. The condition of a finger already affected with this disease may be aggravated by a fall and result in a claim for a sprain of one of these joints. The pain, swelling and discoloration characteristic

Fig. 54.—Syphilitic dactylitis. (American Text Book, Diseases of Children).

of a sprain will soon subside, however, while the above condition will persist. Syphilitic dactylitis is a slow process and in time may cause ulceration.

Rheumatoid Arthritis is an affection which frequently involves the joints of the fingers or thumb, and this condition may be claimed as the result of a sprain. This disease in the acute stages usually involves several joints at the same time or one joint may be repeatedly affected. It is characterized by a lateral enlargement of the joints which are painful on movement, and this is soon followed by rigidity, deformity and a deposit of lime salts surrounding the articulation, tenderness on pressure is slight and redness of the joints is absent.

Fig. 55.—Deformity of arthritis deformans. (Lockwood).

TOTAL DISABILITY lasts from 3 to 7 days in preferred risks when a sprain occurs to the fingers or thumb of the right hand and the occupation requires the constant use of the hand. The same class of risks are never totally disabled when the injury occurs to the left hand. Ordinary risks are not totally disabled from a sprain of the fingers or thumb, but sometimes when a number of joints of both hands are injured at the same time, total disability may last from 3 to 7 days.

PARTIAL DISABILITY of 1 to 2 weeks is occasionally necessary in preferred risks when several joints have been sprained, and this is especially true if the injury occurs to the right hand. Ordinary risks are not often entitled to any partial disability unless the duties of the occupation require the use of the hands and the sprain has been severe, when 1 week is generally sufficient.

EFFECTS: None.

DISLOCATIONS BETWEEN THE JOINTS OF THE HAND AND FINGERS

INFORMATION: Dislocations of the carpo-metacarpal joints, the metacarpo-phalangeal and of the phalanges are frequently seen. These injuries may be produced by a sudden twist-

ing or forcible bending forward or backward of the joints; the most frequent dislocations being those between the phalanges themselves and the metacarpo-phalangeal joint of the thumb.

SIGNS AND SYMPTOMS are pain, tenderness, swelling followed by discoloration, loss of movement in the affected joint and evidence that the bones are not in their proper position.

Fig. 56.—X-ray dorsal dislocation of the first phalanx of the thumb. (Scudder).

COMPLICATIONS: *Fractures* sometimes complicate these dislocations and are best diagnosed by crepitation, which is usually easy to elicit, and the use of the x-rays. Fractures prolong disability somewhat when found in connection with these injuries.

TOTAL DISABILITY lasts from 1 to 2 weeks in preferred risks when the duties of the occupation require much use of the hands, such as telegraph operators, stenographers, etc.; in the same class when the injury occurs to the left hand and the duties are office and supervising, total disability seldom lasts more than 1 to 3 days. Ordinary risks may require from 1 to 2 weeks of total disability following a dislocation of the joints of the fingers or thumb, but this time is not often demanded, unless several joints are dislocated at the same time or the hand is otherwise injured.

PARTIAL INDEMNITY of 1 week is allowable in some cases to preferred risks when the dislocation has occurred to the

right hand and has badly lacerated some of the ligaments, and the occupation requires much use of the hand. In the same class when the injury occurs to the left hand and the duties are such as not to require the constant use of the hand, this form of disability lasts from 1 to 2 weeks. Ordinary risks are not entitled to any partial disability.

EFFECTS: None.

PART III

FRACTURES AND AMPUTATIONS INVOLVING THE UPPER EXTREMITY

FRACTURES OF THE SCAPULA

INFORMATION: The scapula is a bone which is seldom fractured, and when such an injury is received, it is almost invariably due to direct force. Fractures of this bone may involve the body, the edges or some of its processes.

SIGNS AND SYMPTOMS depend on the part of the bone fractured. The body of the bone being so well imbedded in the muscular tissue, fractures of that part or the borders are sometimes hard to distinguish. Crepitation may be present with swelling and very extensive discoloration, pain on movement and especially when the hand and arm is placed to the back and tenderness over the point of injury. Fractures of the acromion process show flattening of the shoulder, with the injured shoulder on a lower level than the one on the opposite side, crepitation, localized pain and tenderness. Those involving the coracoid process are usually complicated with fractures of other parts of this bone and are best diagnosed by means of the x-rays.

TOTAL DISABILITY lasts from 4 to 6 weeks in preferred risks when the injury occurs to the right scapula and the constant use of the right arm is necessary in the occupation. In the same class of risks, if the injury occurs to the left scapula and the duties of the occupation are office and supervising, from 2 to 3 weeks are usually sufficient. Ordinary risks require from 4 to 8 weeks of total disability for a fracture involving any part of this bone. Compound fractures of this bone seldom occur to the body, but

when the acromion process is broken, a compound fracture may result. Total disability, however, is not often increased by this complication.

Fig. 57.—Multiple fractures of the scapula. Railroad accident. (Scudder).

PARTIAL DISABILITY of 1 to 4 weeks is payable to preferred risks; this time depending on the exact duties of the occupation and the location of the fracture, whether involving the right or left scapula, the body of the bone or some of its processes. Ordinary risks are not entitled to any partial disability.

EFFECTS: Fractures of the body of this bone seldom leave any permanent disability or deformity even though ununited. Fractures between the acromion process and the spine of the scapula, if properly united, also leave no permanent disability or deformity. If this fracture unites in a malposition, certain limitation of movement in the arm is present, but hardly sufficient to have any bearing on the issuance of an accident policy. The in-

dividual is insurable for any kind of a policy from three to six months after complete recovery from any fracture involving any part of this bone.

FRACTURES OF THE HUMERUS

INFORMATION: Fractures of the humerus are frequently seen and most often involve the shaft of this bone, although either extremity or the processes connected with it may also be fractured. Such injuries generally result from direct force, but muscular action may produce these fractures. Fractures involving either extremity may extend into the shoulder or elbow joints, thereby complicating the injury, greatly prolonging disability and resulting in impaired motion of the joint when recovery takes place. More ununited fractures result when the shaft of this bone has been involved than in any other bone of the body.

Fig. 58.—Fracture of the surgical neck of the humerous. (Scudder).

SIGNS AND SYMPTOMS: Severe pain follows a fracture of the humerus, with weakness, profuse perspiration, nausea, faintness, and in many cases, loss of consciousness. The pain is greatly increased on movement and is accompanied by tenderness and unnatural mobility at the point of injury; much swelling of of arm follows with extensive discoloration. If the fracture has ruptured or is making pressure on the brachial artery, the radial pulse is absent. Injuries to either extremities show signs and symptoms characteristic of the particular part involved; if the surgical neck of the humerus is fractured, pain is transmitted to

Fig. 59.—Fracture of the lower part of the shaft of the humerous. (Scudder).

the fingers on account of pressure on the brachial plexus; shortening may also be present and pronounced displacement evident. Fractures involving the lower extremities in which the condyles are broken off, show broadening of this end of the bone with crepitus and movement at a point where it should not be present.

DIFFERENTIAL DIAGNOSIS: *Dislocations* of the head of the humerus are sometimes hard to distinguish from fractures of the surgical neck. In dislocations the flattening of the shoulder is higher than in fractures. The head of the bone is in the axilla in a dislocation and can be felt to rotate with the humerus, while in a fracture it remains in its normal position and ceases to move when the arm is turned. In a fracture the false joint is below the shoulder, while with a dislocation, absence of movement in the usual position is evident. Examination with the x-rays makes the diagnosis positive.

COMPLICATIONS: *Arteries or Nerves* may be injured in these fractures; if the former, the brachial artery may be so badly torn and circulation so interfered with, that amputation of the extremity is necessary at once or within a few days after the accident. When the nerves only are involved by pressure or laceration, pain of more or less severity may be present and transmitted to the fingers and persist for an uncertain period.

TOTAL DISABILITY lasts from 6 to 10 weeks in preferred risks such as physicians, lawyers and others who require the daily use of both arms in the occupation. In the same class when the fracture involves the left humerus and the duties do not require the constant use of both arms, from 2 to 4 weeks are usually sufficient. Ordinary risks require from 8 to 12 weeks of total disability following a fracture of this character. Fractures of either extremity of this bone involving the joint increase total disability 1 to 3 weeks, according to the severity of the fracture and the resulting deformity. When fractures of the shaft of this bone are ununited and an operation is necessary for wiring, total disability is increased 4 to 6 weeks from the date of operation. Compound fractures of the humerus are not uncommon, and when they exist, total disability is prolonged 1 to 3 weeks and sometimes longer in all classes.

PARTIAL DISABILITY of 1 to 4 weeks is payable to preferred risks when the duties require much use of both arms. In the same class of risks if the injury is to the left arm, partial disability of 4 to 6 weeks may be necessary. Ordinary risks do not

often deserve any partial disability. Partial disability in all classes of risks in which the fracture has involved either the shoulder or elbow joint, is increased 3 to 6 weeks, and in some cases much longer. This is especially true when the fracture involves the elbow joint and much deformity results; motion being greatly impaired for a much longer period of time.

EFFECTS: Following a fracture of this bone in which union has been good, the arm remains weak for a considerable period. This weakness, however, is not sufficient to cause disability, but obliges the individual to protect the affected arm. If non-union results for any cause and is permitted to exist, the individual would not be insurable for any kind of a policy. Following complete recovery of this fracture, insurance of any character may be safely written from six to nine months after the date of accident.

AMPUTATIONS OF THE UPPER EXTREMITY

INFORMATION: Amputations of the upper extremity may be made through some part of the arm or shoulder as the

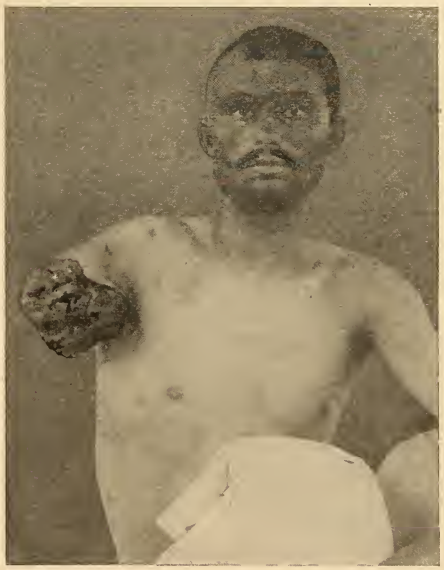


Fig. 60.—Amputation of the right arm, following railroad injury. (Keen's Surgery).

result of very severe injuries, such as mangling by railroad trains or machinery. When it is necessary to remove this extremity at

the shoulder joint on account of injuries received, the hemorrhage and shock have been so great that death generally ensues in a short time. Amputations between the shoulder and elbow are often performed and a good recovery follows. When an individual carrying an accident policy suffers an amputation of the upper extremity within ninety days from the date of accident, the case is easily settled by the policy providing a specific sum for this loss. If both upper extremities are sacrificed, the policy usually pays the principal sum. Some policies pay weekly indemnity in addition to the above. If the amputation is not done in this time, the individual can claim total disability from the date of accident to the time that he can resume a part of his occupation; after which he may claim partial disability for the limit of his policy.

SIGNS AND SYMPTOMS are characteristic of the kind of injury received. Much mangling and tearing of the arm is usually the result of a crushing force. The soft parts are badly lacerated, while the bones are broken in a number of places, the blood vessels torn and injured and the circulation destroyed below the point of injury; great shock is present with hemorrhage, pain and often unconsciousness.

COMPLICATIONS: When an amputation through the humerus or the shoulder joint is necessary, it is seldom that other injuries do not complicate the case. These may be even more severe than the one requiring an amputation, but the length of disability is always governed by the most serious injury.

TOTAL DISABILITY: If death does not occur at once, it may ensue within a few days from the date of accident. Should the individual recover, total disability in all classes of risks lasts from 8 to 14 weeks when the amputation has been made at or through the shoulder joint. If done lower down through some part of the humerus, this form of disability in all classes lasts from 6 to 10 weeks.

PARTIAL DISABILITY follows and is present during the remainder of the life of the individual.

EFFECTS: Any one who has lost an arm is an impaired risk for accident insurance, and is not insurable for this form of policy, although life or health insurance may be safely written on such a person from six to twelve months after the date of accident. If both arms have been amputated, insurance of all kinds would be denied.

FRACTURES OF THE RADIUS AND ULNA

INFORMATION: Fractures of the radius and ulna may involve one or both bones and may occur to the shafts of either bones or to their extremities. Colles' fracture is one of the most frequent fractures that occurs to the lower end of the radius and is described separately. Fractures of these two bones are generally due to direct force. Indirect force and rarely muscular action may be the cause.

SIGNS AND SYMPTOMS are pain at the point of injury which is aggravated by movement in any direction of the hand or forearm, tenderness, much swelling, with early and extensive discoloration. Unnatural mobility exists at the point of injury with crepitus and displacement. If the fracture is at either extremity of the bones pain in the joint on movement is complained of, with

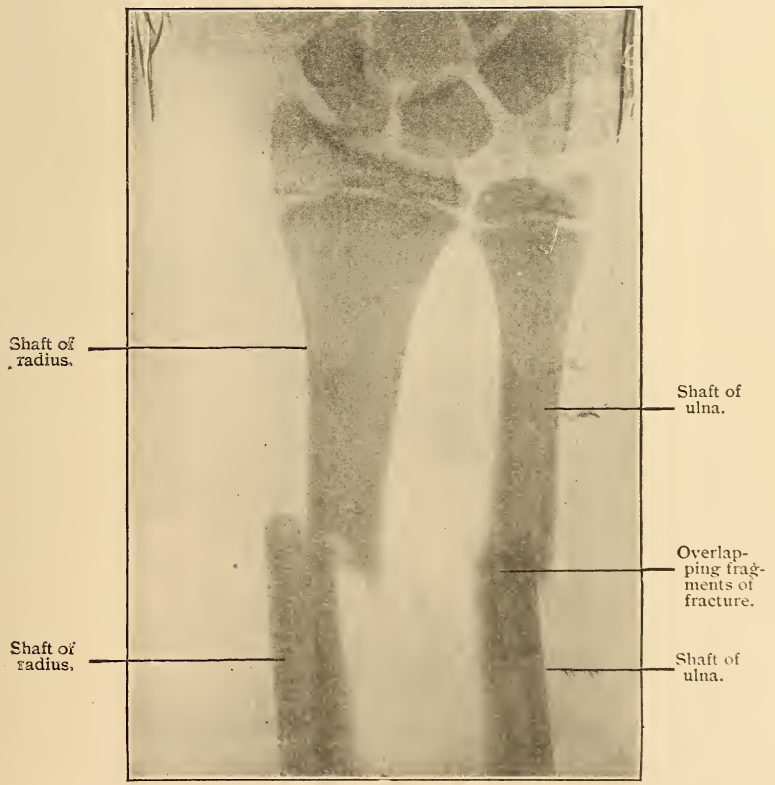


Fig. 61.—Fracture of both bones of the forearm. (Scudder).

loss of motion at this point. Fractures of the olecranon process usually show a wide separation of the fragments and inability to extend the forearm. If the fracture occurs at the neck of the radius, there is crepitation on pronating the forearm and loss of movement in the head of the bone on rotation of the forearm.

COMPLICATIONS: *Dislocations and Injuries* to the nerves and blood vessels in the forearm complicate fractures of these bones. These complications manifest themselves by their characteristic signs and symptoms, and if these are not definite, a skiagraph will show the existing condition.

TOTAL DISABILITY: If the injury involves the right forearm in preferred risks and the duties of the occupation require the constant use of the hands, the disability lasts from 4 to 6 weeks; in the same class of risks when the injury is to the left forearm and the duties of the occupation are office or supervising, total disability is not so long, lasting only 1 to 2 weeks. Ordinary risks are totally disabled, from 6 to 8 weeks following a fracture of either of these bones at any point. If the fracture involves any of the joints in connection with this part of the body, total disability is increased 1 to 3 weeks; this depending on the location of the fracture and the resulting union. Compound fractures of the radius or ulna increase total disability 1 to 3 weeks in all classes of risks. If the fracture enters the joint in addition to being compound, total disability may be much prolonged on account of the location of the break and the infection which follows. Such cases may require 3 to 6 weeks additional time.

PARTIAL DISABILITY is necessary in addition to the above and lasts from 1 to 3 weeks in preferred risks who require the constant use of both arms. In the same class of risks following a fracture of the left forearm and the duties are not such as would require much use of the hands, partial disability lasts from 4 to 6 weeks. Ordinary risks do not often require any partial disability; sometimes, however, 1 to 3 weeks may be necessary. This form of disability is increased 2 to 4 or 6 weeks in all classes of risks in which a fracture extends into and involves any of the joints in connection with the forearm.

EFFECTS: Fractures involving the upper extremity of either the radius or ulna usually produce permanent deformity, but not sufficient to prevent the individual from securing all kinds of insurance as soon as recovery is complete. When the shaft of

one or both bones has been broken, some impaired supination and pronation may result, but this is generally of little importance in relation to accident insurance. Insurance companies accept risks who have suffered from the above fractures for any kind of insurance from three to six months after complete recovery, unless the deformity is so great that a certain amount of permanent disability is present, when an accident policy would hardly be issued.

COLLES' FRACTURE

INFORMATION: Colles' fracture is a transverse or oblique fracture of the lower end of the radius, usually occurring from one-half to one and one-half inches above the articular surface of the lower end of this bone. If the fracture is markedly oblique and runs into the wrist joint, it is known as a Barton's fracture. Colles' fracture is very frequently seen and generally results from a fall on the extended hand. It often occurs as the result of backfiring in gasolene engines.

SIGNS AND SYMPTOMS are pain that is said by the sufferer to be in the wrist joint and which is increased on movement

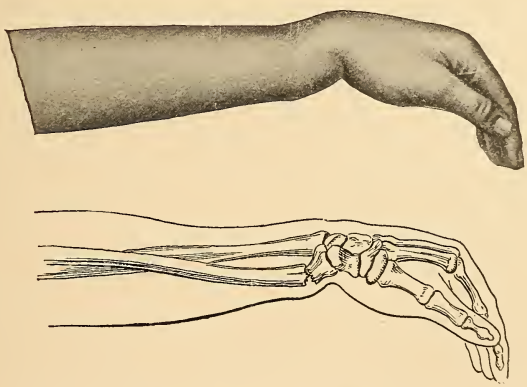


Fig. 62.—Colles' fracture of the lower end of the radius. Lateral view showing silver-fork deformity. (Helferich).

of the hand or fingers, tenderness and a "silver-fork" deformity on the back of the wrist. This projection is caused by the mounting of the lower fragment on to the lower end of the upper fragment and is characteristic of this fracture. Pronation and abduction of the hand is present, crepitation may be elicited when the bones are replaced in their proper position and extensive swell-

ing and echymosis which involves the lower end of the forearm and the hand, follow these injuries. The use of the x-rays confirms the diagnosis and also shows if the bones are in proper position after reduction.

COMPLICATIONS: *Fracture* of the lower end of the radius which is so oblique as to enter the wrist joint may produce more or less stiffening of this articulation. If this results from any cause it is generally a temporary condition, as the hand is so constantly used that perfect motion returns in time.

TOTAL DISABILITY in preferred risks whose occupation requires the constant use of both hands lasts from 4 to 6 weeks. If the fracture occurs to the left wrist and the duties of the occupation are office, etc., preferred risks are not often totally disabled more than 1 to 3 weeks. Ordinary risks demand from 6 to 10 weeks of this disability for a fracture involving either radius. Colles' fracture is seldom complicated by an opening through the skin, but if such a condition exists, total disability is increased 1 to 3 weeks on account of the fracture being compound.

PARTIAL DISABILITY of 1 to 3 weeks is allowable to preferred risks who require much use of the hands and the injury has occurred to the right forearm. When the fracture involves the left radius and a short period of total disability has followed, preferred risks whose duties are mainly clerical, require from 4 to 6 weeks of this disability. Ordinary risks are rarely, if ever, entitled to any partial disability.

EFFECTS: Fractures in this situation are usually properly reduced and no deformity follows, the risk being insurable for all kinds of insurance from four to six months after the date of accident. If a deformity results from the fracture, permanent disability does not often ensue, and the partial disability or inconvenience due to stiffening and partial loss of motion is hardly sufficient to prevent the individual from securing accident insurance six months or more after the date of injury.

AMPUTATION OF THE FOREARM

INFORMATION: Accidents that badly lacerate the tissues of the hand and forearm may result in amputations on account of this condition or interference with the circulation. Such injuries usually occur to ordinary risks and are caused by the hand and forearm being caught in machinery or between moving objects.

When an individual becomes a claimant under an accident policy for an amputation of either arm below the elbow or both of them above the wrist joint, the policy usually provides a specified sum for such a loss and the length of total and partial disability is unimportant. If this is not the case, the time as given generally covers the length of disability.

SIGNS AND SYMPTOMS: Following a severe injury that might cause amputation, there is evidence of the hand and forearm being torn and lacerated, with more or less hemorrhage, great shock, pain and usually a number of contusions and other injuries to other parts of the body.

COMPLICATIONS: *Dislocations* involving the elbow or shoulder joints or fractures of some of the bones of the upper extremity are often seen in conjunction with injuries which result in amputations between the wrist and elbow joints; any other kind of an injury may also complicate such an accident.

TOTAL DISABILITY in preferred risks lasts from 2 to 4 weeks when the accident that causes an amputation of the left forearm is uncomplicated. In the same class of risks and under the same condition, if the injury occurs to the right forearm, total disability lasts from 4 to 8 weeks. Ordinary risks are totally disabled from 6 to 10 weeks following an amputation which is uncomplicated by other injuries and which is performed on either forearm. Infection will prolong the above time 1 to 4 weeks.

PARTIAL DISABILITY is present in all classes of risks for the remainder of the life of the individual.

EFFECTS: Individuals who have suffered an amputation of either hand or forearm below the elbow joint are impaired risks and are not often considered insurable for accident insurance. Life or health insurance, however, may be written on this class from six to twelve months after the date of accident.

FRACTURES OF THE CARPAL BONES

INFORMATION: Fractures involving one or more of the carpal bones are unfrequent and when present are usually not diagnosed unless the x-rays have been used. These fractures are due to direct, violent force which is sustained when a fall occurs and the weight of the body is thrown on the hyper-extended hand. These injuries are most frequently said to be sprains of the wrist, it being impossible in some cases to differentiate between a sprain and a fracture,—unless a radiograph is made. Fractures of these

bones when produced by machinery, etc., often result in compound comminuted fractures, and these often result in an amputation. In such cases, accident insurance policies usually pay a certain sum for the loss of a hand at or above the wrist joint. If such an amount is paid for this kind of an accident, total and partial disability for the time the individual is disabled is not always allowed, although some policies pay weekly indemnity, in addition to a stipulated figure.

SIGNS AND SYMPTOMS: After such an injury to the wrist, there is external evidence of the accident, sometimes an abrasion or swelling involving this part of the extremity and extending up the forearm and down into the hands and fingers; pain and tenderness are always present, motion is impaired and in some cases crepitus can be obtained. These fractures are sometimes compound, when the usual signs of such a fracture are present.

DIFFERENTIAL DIAGNOSIS: *Fractures of the Carpus* and sprains of any of the joints between the lower end of the radius and ulna and the bases of the meta-carpal bones are extremely hard to diagnose. Fractures involving more than one of the bones can usually be diagnosed by aid of the fingers, but fractures involving one bone with perhaps only a small part of a process broken off, are almost impossible to find without the use of the x-rays, and such injuries at first are frequently said to be sprains, but later on account of prolongation of disability a fracture is suspected. In a fracture crepitus can usually be obtained, and this is not present in a dislocation or sprain. Deformity exists with a dislocation at a joint, while with a fracture it is usually between the articular surfaces, although it may be close to a joint. Movement in a fracture which is not impacted is present, not so with a sprain, and if a dislocation, movement is lacking at a place where it should be secured.

Fig. 63.—X-ray fracture of scaphoid. A five-months' "sprained wrist." (Codman and Chase).

COMPLICATIONS: *Compound Fractures* of these bones almost invariably result in infection and stiffening of the wrist joint,—if not in an amputation. This latter, however, is seldom

performed unless the bones are so badly broken that circulation is interfered with or it is probable that on recovery, the hand and fingers will be so stiff and deformed that it is best to remove the part at once.

TOTAL DISABILITY lasts from 3 to 6 weeks in preferred risks when a fracture occurs to the carpal bones of the right hand and is uncomplicated and the hand must be constantly used. In the same class, if the carpal bones of the left hand are fractured and the duties of the occupation consist of office and supervising, this disability lasts from 3 to 7 days only. Ordinary risks require from 4 to 8 weeks of total disability following a fracture which involves these bones of the wrist. Compound or comminuted fractures prolong disability 1 to 4 weeks, according to the severity of infection and the number of bones involved. If an amputation is performed, from 3 to 5 weeks are necessary for complete healing of the parts after the date of operation.

PARTIAL DISABILITY exists in preferred risks who require the constant use of the hands and 1 to 3 weeks is the usual time in addition to the above total, when the injury has involved the right wrist. In the same class when the opposite wrist is injured and the duties of the occupation do not require extended use of the hands, from 3 to 6 weeks are necessary. Ordinary risks seldom deserve any partial disability. If an amputation is performed on account of the accident, partial disability is permanent and can be claimed for the limit as allowed by the policy, unless it provides a specified sum for the loss of a hand at or above the wrist as the result of accidental injury.

EFFECTS: Motion is generally impaired following a fracture of any of the carpal bones, but on account of the hand being so frequently used, this impairment gradually disappears and in time perfect motion is obtained. Individuals with a history of such an accident are insurable from six to twelve months after the date of accident, unless an amputation has been performed when accident insurance would be denied such a person, but life or health insurance could be safely written.

AMPUTATIONS THROUGH THE CARPUS

INFORMATION: Amputations at the wrist joint or between the bases of the meta-carpal bones and the inferior radio-ulnar articulation follow severe injuries to the hand and fingers

which destroy the tissues to such an extent that recovery is impossible; rarely is an amputation performed for a bad dislocation, but sometimes a compound comminuted fracture of the carpus may result in an amputation at the point of injury. Gunshot wounds involving the hand or fingers or wounds produced by explosion often require amputations. Insurance policies generally pay a specified sum only for the loss of a hand at or above the wrist joint, but in some cases weekly indemnity is payable in addition. If both hands are lost at or above the wrist joint, the majority of companies pay the face of the policy, provided in any case that the operation for the removal of the hand or hands occurs within ninety days from the date of accident.

SIGNS AND SYMPTOMS: After the hand has been taken off, the evidence is plain and indisputable and by comparing the two upper extremities, the line of amputation can be easily learned. If the case is seen before the hand is amputated, a bruised and lacerated extremity is evident. Shock is always present following an injury of such a character, with pain, hemorrhage, swelling of the upper arm and in some cases injuries to other parts.

TOTAL DISABILITY lasts from 4 to 6 weeks in preferred risks when an amputation of the right hand takes place. If the left hand has been removed, the same class of risks demand from 2 to 4 weeks of this disability. Ordinary risks are totally disabled from 4 to 8 weeks when either hand has been removed by operation following an accidental injury. Infection of the stump prolongs this disability 1 to 4 weeks in all classes of risks. If both hands or one hand and one foot are amputated, the face of the policy is payable to the insured.

PARTIAL DISABILITY is present after an amputation of the hand and persists during life.

EFFECTS: Individuals having suffered the loss of a hand, are not insurable for accident insurance, but a life or health policy can be safely written on this class, all other conditions being favorable. The loss of both hands would prevent any form of insurance being written.

FRACTURES OF THE METACARPAL BONES

INFORMATION: Fractures of the metacarpal bones of the hand are frequent; the metacarpal bone of the index finger

being the one most often involved. These injuries are usually due to direct force, such as a blow on the palm or back of the hand, but sometimes indirect force such as a fall produces the injury. Compound fractures of these bones are not unusual.

SIGNS AND SYMPTOMS: Swelling of the hand appears and is followed later by discoloration, with pain which is increased on movement or when the hand is in the dependent position and tenderness over the injury. On examination, the ends of the fractured bones are felt and crepitus is sometimes elicited. Loss of power in the hand is present.

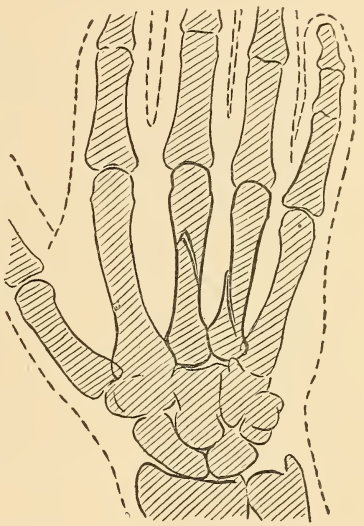


Fig. 64.—Oblique fracture of the third and fourth metacarpal bones; X-ray tracing. (Scudder).

TOTAL DISABILITY in preferred risks lasts from 2 to 4 weeks when any of the metacarpal bones of the right hand have been injured and the occupation requires the constant use of the hand or fingers. In the same class when the fracture involves the left hand and the duties can be performed mostly by the right hand, total disability lasts from 1 to 5 days only. Ordinary risks require from 3 to 5 weeks of total disability following a fracture of these bones of either hand. If the fracture is compound and infection results, the above total disability in all classes of risks is prolonged 1 to 2 or 3 weeks.

PARTIAL DISABILITY of 1 to 2 weeks is payable to preferred risks following an injury to the right hand. If the fracture involves the left hand in the same class, 2 to 3 weeks are generally sufficient. Ordinary risks are rarely entitled to partial disability.

EFFECTS: These fractures generally unite with little or no deformity and no permanent impairment of the function of the hand, unless the fracture has involved the joints at either extremity of the bones when slight stiffening may be the result. Individuals are therefore insurable for all kinds of insurance as soon as union is complete.

FRACTURES OF THE PHALANGES

INFORMATION: Fractures involving the phalanges of the fingers or thumb are frequent and are usually due to direct and violent force; not infrequently these fractures are compound.

Fig. 65.—Lateral X-ray view of fracture of the shaft of the second phalanx of the middle finger. (Eisendrath).

SIGNS AND SYMPTOMS are pain which is worse on movement in the affected finger and also when the hand is in the dependent position; swelling followed by discoloration, crepitus on moving the fractured ends of the bones together and deformity.

TOTAL DISABILITY in preferred risks lasts from 2 to 4 weeks when the fracture involves one or more of the phalanges of the right hand and the individual is right handed and must use the hand and fingers constantly in the occupation. In the same class when the injury is to the left hand, total disability is not often allowable. Ordinary risks demand from 3 to 4 weeks of this disability for uncomplicated fractures involving these bones. Compound fractures of the phalanges are frequent and total disability is increased 1 to 2 weeks in such cases.

PARTIAL DISABILITY in preferred risks lasts from 1 to 2 weeks when the accident has occurred to the right hand and the duties of the occupation require the use of that member. In the same class when the injury involves the left hand and no total disability has been present, from 2 to 4 weeks of partial disability are necessary. Partial disability in preferred risks is prolonged 1 to 2 weeks when the fracture is compound. Ordinary risks are not entitled to this form of disability.

EFFECTS: Fractures of these bones usually unite without deformity. If the fracture involves one of the joints, more or less stiffening may result. Even in such cases, the risk is unimpaired for all kinds of insurance from three to six weeks after the date of accident.

AMPUTATIONS OF THE PHALANGES

INFORMATION: Amputations of the fingers or thumb follow severe injuries which mash or destroy the soft tissues and the bones so completely that removal of the part is necessary. These injuries are generally produced by machinery or catching the fingers or thumb between doors and frames of buildings, cars, etc. Some accident insurance policies pay a specified sum for the loss of a finger or thumb in addition to weekly indemnity, but the majority of companies only pay weekly indemnity unless the claimant accepts a certain sum in lieu of this total or partial disability. When a claim for the loss of a finger or thumb or part of one is received, it should be thoroughly investigated. Malingerers select the fingers of the left hand—if they are right handed—for mutilation, and are never able to produce witnesses of the accident, although they may fill out a blank themselves under another name as a witness. These fraudulent claims are always presented under the double indemnity clause if possible, and in almost every case the claim can be settled for considerable less than it is worth, thus showing that the malingerer is willing to settle for any obtainable sum.

SIGNS AND SYMPTOMS: Severe pain with nausea follows the infliction of an injury that results in the amputation of these parts; there is evidence of the mashed finger or thumb and slight shock. Some other part of the hand or body may also be injured at the same time, producing the signs and symptoms peculiar to the part involved.

TOTAL DISABILITY lasts from 2 to 4 weeks in preferred risks who require constant use of the hands when the amputation is performed on the fingers or thumb of the right hand. In the same class when the injury has occurred to the fingers or thumb of the left hand, total disability lasts from 2 to 5 days and is followed by a longer period of partial. Ordinary risks are totally disabled from 3 to 6 weeks when an injury to the hand results in an amputation of the fingers or thumb. If the injury is so extensive that one or more fingers are removed at the time of the operation, total disability in all classes of risks is increased 1 to 2 weeks beyond the above specified time. Infection almost invariably follows in these cases, but the time is not prolonged thereby.

PARTIAL DISABILITY of 1 to 3 weeks is necessary in preferred risks when the amputation has occurred to the right

hand, and from 3 to 5 weeks in the same class when some part of the left hand has been amputated and a short period of total disability has preceded this time. Ordinary risks are not often partially disabled.

EFFECTS: Amputations resulting in the loss of the end of one finger or a whole finger, produce no impairment of the risk. If several fingers have been lost in this manner, and especially if the thumb has been amputated, the risk may not be insurable for accident insurance, but each case must be considered separately. Life or health insurance can be safely written as soon as the parts are completely healed.

CHAPTER XI

ACCIDENTS AND DISEASES INVOLVING THE LOWER EXTREMITIES

PART I

INJURIES TO THE SOFT TISSUES

ABRASIONS AND CONTUSIONS OF THE HIP AND THIGH

INFORMATION: Abrasions of the hip or thigh usually occur in conjunction with other or more severe injuries to different parts of the body. Contusions in this location may not be accompanied by any other injury unless it be an abrasion. Both abrasions and contusions result from direct force violently applied, such as a severe fall or when the body is caught between moving objects. These injuries usually involve the soft tissues only; sometimes, however, a hard fall will produce an injury to the acetabular cavity of the os innominata by driving the head of the femur against the articular surface of this cavity.

SIGNS AND SYMPTOMS are slight swelling with extensive discoloration and stiffness in the muscles which prevents movement without much pain; tenderness is always present and when the injury has involved the head of the femur and its articular cavity, there is deep seated pain, inability to raise or stand on the injured leg and severe pain on the slightest movement.

COMPLICATIONS: *Tuberculous Disease* of this joint may be present in the latent stage and a severe contusion set up an active inflammation, when the signs and symptoms would be the same as for a contusion, except that the evidence of the accident would not disappear, but on the contrary the inflammatory symptoms would increase and be followed by an elevation of the temperature and in some cases abscess formation. Differential diagnosis and complications are more fully considered under Sprains of the Hip Joint.

TOTAL DISABILITY is rarely deserved in abrasions involving this part of the body unless complicated with some other or more severe injury. Contusions which injure the soft tissues only and are very severe in character, produce total disability of 2 to 7 days in all classes of risks. Total disability may last from 1 to 2 or 3 weeks in severe contusions which result in the formation of a hematoma and infection of the same. Contusions resulting in an inflammation involving the head of the femur, reqüire from 2 to 4 weeks of total disability in all classes of risks.

PARTIAL DISABILITY is never deserved in uncomplicated abrasions, but 2 to 7 days may sometimes be allowed in contusions which prevent an individual from doing the accustomed amount of outside work.

EFFECTS: None, unless the injury has involved the head of the femur. In such cases when total disability has lasted any length of time, there may be a suspicion that some disease exists in this cavity. If the disability has been caused by the accident alone, all kinds of insurance can be written as soon as recovery is complete, but if it is thought a tuberculous disease is present, the individual would not be insurable for any kind of a policy.

CONTUSIONS OF THE KNEE JOINT

INFORMATION: Contusions of the knee joint are frequent and usually result from falls in which the body alights on the bended knee or the joint is caught between hard objects and squeezed. As this is the most complicated joint of the body and has the greatest number of ligaments in connection with it, contusions and also sprains cause longer periods of disability when it is injured than when the same degree of injury occurs to some of the other joints.

SIGNS AND SYMPTOMS: After a contusion has been sustained to this part of the body, swelling follows in the connective tissue surrounding the joint and within twenty-four to thirty-six hours fluid is usually effused inside of the articulation. Pain of more or less severity is complained of and this is aggravated by putting weight on the injured foot, tenderness generally exists over the whole articulation, but is more pronounced in spots and discoloration ensues within twenty-four hours when the superficial tissues have been the most severely injured. If the damage is deep seated, discoloration does not appear until after one to two

or three days. Palpation shows fluid inside of the articulation and later as this fluid becomes absorbed, grating is elicited on movement.

DIFFERENTIAL DIAGNOSIS: *Charcot's Joint* is an osteo-arthritis occurring in individuals suffering from locomotor ataxia. The knee joint is the one most frequently involved in this

FIG. 66.—CHARCOT'S JOINT. (Eisendrath). The illustration shows the enormous enlargement of the lower end of the femur as a result of trophic disturbances and the ability to produce abnormal abduction in the knee-joint.

disease which is often sudden in onset accompanied by little, if any pain, and unconnected with any injury. The swelling of Charcot's joint is very extensive and characterized by an effusion inside of the joint, no discoloration exists and great range of movement is present with deformity and sometimes dislocation. Muscular atrophy also occurs in the muscles of the leg and thigh.

Hysterical Joint is most common in women and frequently affects the knee. In this affection, pain and tenderness are complained of, the skin is hyperesthetic, muscles generally rigid and the joint held in a fixed position. Swelling or discoloration does not exist in this condition and effusion is also absent. Sometimes at intervals, the joint may be red and hot, but the characteristic discoloration of an injury never appears.

COMPLICATIONS: *Dislocation* of either of the semi-lunar cartilages may take place in a severe contusion; in which case the period of disability is prolonged.

Sprains of this joint often complicate contusions and are best indicated by spots of tenderness over the location of the ligaments that are torn and lacerated.

TOTAL DISABILITY in preferred risks whose duties are performed in a sitting position, seldom lasts more than 2 to 3 weeks in severe contusions to the knee joint, while slight contutions require from 5 to 10 days only of this disability. When the occupation requires the upright position or much walking, total disability lasts from 2 to 4 weeks in the same class of risks following a severe contusion, and from 1 to 2 weeks when the injury has not been severe. Ordinary risks are totally disabled from 1 to 2 weeks from slight contusions to this joint and from 3 to 4 weeks when the injury has been more serious.

PARTIAL DISABILITY of 1 to 3 weeks is payable to preferred risks when the duties of the occupation are performed inside. If the duties are performed in the upright position, partial disability of 2 to 4 or 5 weeks is sometimes necessary to this class of risks following a severe contusion to the knee joint. Ordinary risks are seldom entitled to partial disability.

EFFECTS: Insurance companies rarely make any change in a policy when a policy holder has suffered from a severe contusion to the knee joint and has recovered in a reasonable time. But if an individual with a history of a severe contusion in which disability has lasted for some time would apply for accident insurance, a company would hardly issue such a policy until at least from three to six months after complete recovery had taken place. Such an accident has no bearing on a life or health policy.

INCISIONS AND LACERATIONS OF THE HIP OR THIGH

INFORMATION: Incisions and lacerations involving the hip or thigh are not often seen except in very severe injuries in which serious complications exist. Long, deep or transverse incisions involving this part of the body result in disability; while slight, superficial cuts cause inconvenience only. Lacerations of the hip or thigh do not often occur under personal accident policies, but are met with in liability examinations. Severe lacera-

tions that are unaccompanied by other injuries may cause disability in all classes of risks.

SIGNS AND SYMPTOMS: Incisions and lacerations of the hip or thigh produce pain, swelling, hemorrhage and evidence of a cleanly cut wound or a torn, lacerated one. Dirt and other

Fig. 67.—Severe lacerated wound of the left thigh with loss of soft tissues. (Keen's Surgery).

particles are usually found in lacerated wounds and infection almost invariably occurs. If the laceration has been extensive and deep or an incision has been transverse and severed some of the muscles of the thigh, loss of power in the leg is evident. Infection is very frequent in this class of wounds and prolongs disability.

TOTAL DISABILITY in all classes of risks requiring much walking or standing on the feet, lasts from 1 to 2 weeks when the incision has been longitudinal and deep. If it is transverse and severed some of the muscles, total disability lasts from 2 to 3 weeks in all classes. Superficial lacerations involving the immediate underlying tissues only, produce total disability of 3 to 7 days in all risks. Deep lacerations that are almost invariably followed by infection, require from 1 to 2 weeks of total disability in preferred risks. Ordinary risks are totally disabled from 2 to 3 weeks in this class of injuries. Deep incisions or lacerations which may occur to the inner side of the thigh and wound some of the im-

portant blood vessels or nerves may increase the above time 2 to 4 weeks when an operation is performed.

PARTIAL DISABILITY of 1 to 2 weeks is payable to preferred risks following incisions which have caused a short period of total disability. Severe lacerations which have resulted in a more or less extended period of total disability in preferred risks, require from 1 to 3 weeks of partial when the occupation of the individual requires that the erect position be maintained during business hours. Ordinary risks are not often entitled to partial disability following either incisions or lacerations; when allowable 1 to 2 weeks may be granted.

EFFECTS: A scar results from this class of wounds, but produces no deformity or disability. If the injury has involved some of the important blood vessels or nerves of the thigh and an operation is performed, the result of this would govern the insurability of the risk. Ordinarily, individuals are insurable for any kind of insurance as soon as recovery is complete after the above injuries.

PUNCTURED WOUNDS OF THE HIP OR THIGH

INFORMATION: Punctured wounds involving the soft tissues of the hip or thigh are produced by any sharp-pointed instrument and also result from missiles that are driven into the tissues by explosives. Gunshot wounds may be complicated by an injury to the bones of the pelvis, the femur or some of the internal organs of the lower part of the abdomen. Punctured wounds involving these parts also result from animal bites and are invariably infected. If the animal is not rabid, the wound heals in the same length of time as an ordinary infected wound. Superficial punctured wounds to this part of the body which are not very deep or numerous, seldom produce any disability in any class of risks.

SIGNS AND SYMPTOMS: Punctured wounds involving the soft tissues are evident and are followed by pain, swelling, infection and a discharge of pus. If the puncture is due to a gunshot injury and involves the soft tissues only, the signs and symptoms are the same as the above. When a bone is fractured there is additional evidence of such a condition. Should the puncture be complicated by an injury to some of the contents of the lower part of the abdominal cavity, signs and symptoms peculiar to the in-

jury supervene. If it is not possible to diagnose a fracture or injury to some of the bones of the hip or thigh when the puncture has been caused by a bullet, the use of the x-rays is necessary and the diagnosis is then easily made.

COMPLICATIONS: *Fractures* involving the bones of the pelvis or the femur as the result of gunshot injuries, greatly prolong the periods of disability, but this time depends on the character of the wound, its location and severity.

Hydrophobia may follow and develop within a few weeks or may be delayed as long as one to two years. If this disease supervenes, the result is fatal in all cases; therefore an insurance company always attempts to make an early settlement of a claim arising from an animal bite. Should the disease occur and be followed by death ninety days or more after the date of injury and the company had not secured a release from the individual injured, it is questionable if there would be any liability on the part of the company for the payment of even weekly indemnity, as the policy provides that the disability must be immediate and continuous, and ninety days or more after the injury could hardly be construed as conforming to these conditions.

TOTAL DISABILITY does not often follow superficial punctured wounds when due to animal bites or sharp-pointed instruments. If the wound has been deep and is followed by infection, preferred risks whose occupation requires considerable walking may be totally disabled from 1 to 2 weeks. Ordinary risks are seldom totally disabled. Gunshot wounds to the hip or thigh in preferred risks result in total disability of 1 to 3 weeks when the soft tissues only are injured and infection follows. If the bullet fractures some of the bones of the pelvis or femur, total disability is governed by the length of time required for the recovery of the more severe injury or the fracture involving one or more bones and this is usually from 8 to 12 weeks in all classes of risks.

PARTIAL DISABILITY follows in preferred risks who have suffered from superficial punctured wounds which become infected, and lasts from 1 to 2 weeks. Ordinary risks are not often entitled to any partial disability from this class of injuries. Gunshot wounds that have produced a long period of total disability in preferred risks require from 2 to 4 or 6 weeks of partial. Ordinary risks do not often demand partial disability following gun-

shot wounds, for the reason that they do not return to work until all the duties of the occupation can be resumed.

EFFECTS: Punctured wounds which involve the soft tissues only, heal with a resulting scar and no permanent deformity or disability. Gunshot wounds which fracture the femur or other bones may result in deformity and partial disability and the individual is then not insurable for an accident policy, although life or health insurance may be safely written on such persons after complete recovery.

BURNS AND SCALDS OF THE HIP OR THIGH

INFORMATION: When the hip or thigh is burnt or scalded the injury is usually severe, for the reason that these parts are protected by clothing and the agent which causes the burn or scald gets under the clothing and is confined; thereby producing a much more serious injury than on the exposed surfaces of the body. These burns are generally due to hot liquids, acids, steam or molten metal, and are more frequently seen in ordinary risks and those whose occupation is very hazardous.

SIGNS AND SYMPTOMS depend on the cause of the injury and the extent of surface involved. If the parts are scalded by hot steam or boiling liquids, blisters may form or the scald may be so severe that the parts are destroyed and sloughing occurs; these burns are usually superficial and involve a considerable area. Molten metals, acids and caustic alkalies burn deeply, and in some cases when the burn is caused by an overheated piece of metal, the parts are carbonized. Pain, swelling, tenderness and shock always accompany severe burns or scalds and suppuration follows almost invariably.

TOTAL DISABILITY lasts from 1 to 2 weeks in preferred risks when the burn or scald is superficial and involves an area of two to four inches in diameter. In ordinary risks, the same kind of injury will cause total disability of 2 to 3 weeks. In moderately severe burns or scalds in which the area involved is of considerable extent or deep, total disability lasts from 3 to 5 weeks in preferred risks. Ordinary risks under the same conditions are totally disabled from 4 to 6 weeks. Very severe burns which are deep or cover a large area of the hip or thigh result in total disability to all risks of 6 to 12 weeks or more, depending on the agent which causes the injury and also the tissues destroyed. In

these very severe burns operations for skin grafting are necessary, but usually an attempt is made to encourage the formation of new skin during the above period of disability; if this is not done, each operation for this purpose prolongs total disability 2 to 3 weeks in all classes.

PARTIAL DISABILITY is payable to preferred risks following all degrees of burns and scalds involving these parts and lasts from 2 to 4 or 8 weeks; the usual time, however, being from 1 to 3 weeks. Ordinary risks are not often entitled to partial disability, but some individuals insured under this class require this form, and may be partially disabled the same length of time as preferred risks.

EFFECTS: Scars always follow burns and scalds in which the deep layers of the skin have been destroyed, and in time these cicatrices contract and result in deformity and sometimes permanent disability. This is especially true when a large area of surface has been involved and some of the underlying muscular tissues have been destroyed. Unless the deformity produces a certain amount of permanent disability or hinders the movement of the individual to a more or less extent, the risk is insurable for all kinds of insurance from three to six months after complete recovery. Even if an accident policy cannot be written, life or health insurance may be granted.

ABRASIONS AND CONTUSIONS OF THE LEG

INFORMATION: Abrasions and contusions of the leg, including abrasions over the patella, are very frequent, and the length of disability depends on the location of the injury. Injuries to the anterior surface of the leg produce total and partial disability of a longer time than do the same kind of accidents involving the posterior surface or calf of the leg. The reason for this is that in accidents to the anterior surface, the bone itself is injured, it being protected in this situation only by its own covering and the skin. Abrasions to this part of the body as the result of an accident, most often involve the anterior surface. If the abrasion is produced intentionally, the surface on the internal and anterior aspect of the leg is most often selected. Accidental abrasions, however, are almost invariably deeper, narrower and more severe than self-inflicted ones. Fraudulent claimants more frequently select this part of the body for the purpose of producing

abrasions than perhaps any other. These abrasions are made by various means, such as confining an irritating substance or fluid over the internal and anterior surface of the leg, the use of sand paper or any rough object that will superficially destroy the skin, which is abraded over a broader and longer surface than if the result of an accident. After the skin is once broken, any corroding or irritating metal or poison can be applied when a violent localized inflammation results. Individuals suffering from varicose veins or having suffered from ulcers of the leg in which the skin has formed, but is very tender, are extremely liable to become disabled as the result of very slight injuries, and when these occur, disability is greatly prolonged on account of the previous condition of the leg. Abrasions involving the posterior surface of the leg which is unimpaired by previous disease or injury, heal rapidly and seldom produce disability of any kind. Physicians in examining cases for insurance companies in which an abrasion is the cause of disability, cannot use too much care in this class of injuries.

SIGNS AND SYMPTOMS: Evidence of the abrasion or contusion is apparent, and when the abrasion is on the anterior surface it is usually complicated by a bruise involving the underlying bone, when severe pain is present, especially at night, and this is made worse unless the individual remains in the recumbent position. Contusions also produce pain which answers the above description if the injury involves the bone; swelling and discoloration follows all abrasions and contusions. These injuries occurring to the posterior surface of the leg produce signs and symptoms as above described, with the exception that they are much less in severity.

DIFFERENTIAL DIAGNOSIS: *Accidental Abrasions* involve the upper, middle or lower third of the anterior surface of the leg, and when seen the abrasion is generally deep, narrow, and from one to two or three inches in length. There is usually some discoloration of other parts of the leg, and also small scattered abrasions. The individual complains of pain on walking and a throbbing pain at night. These abrasions are very slow in healing, the scab sometimes remaining two to four weeks or more. Self-inflicted abrasions are usually to one side of the middle line and consist of an abraded surface of two to four or six inches in length and one to two inches in breadth. These abrasions are superficial only, barely rupturing the skin. Severe pain

is never complained of and the injury heals within one to two weeks, the malingerer claiming this time only for disability. When these self-inflicted abrasions are aggravated by binding a corroded copper cent against the tissue, there is evidence of a violent circumscribed inflammation which is not present in an accidental abrasion. Self-inflicted abrasions, when infected suppurate at a number of points, while an abrasion received accidentally usually suppurates at its centre or the part which is most badly injured. Fraudulent claimants allege in many cases that they only carry one accident insurance policy, but this is always an untruth, and investigation reveals a number of accident policies as being in force. If possible, they claim that the injury occurred on a trolley car or under a condition in which double indemnity is payable, and invariably the claimant is alone at the time the so-called accident occurred.

COMPLICATIONS: *Infection* commonly follows abrasions involving this part of the lower extremity, and always prolongs disability.

Periosteitis frequently results from an abrasion or contusion to the anterior surface of the leg, and in some cases goes on to suppuration and requires an incision for evacuation of the pus. Such a condition prolongs disability and the length of time required for recovery of this complication is covered by an insurance policy.

Ulcers are often seen as a complication following an abrasion of the leg to any part of its surface. These ulcers are due to the fact that the skin is in an unhealthy condition and the slightest scratch or abrasion results in an ulcer that is extremely hard to heal. In these cases, the leg shows evidence that the same condition has existed previously. Ulcers may sometimes result when an abrasion ruptures a varicose vein. If disability is prolonged by an ulcer as the result of either of these complications, it is questionable if an insurance company is liable for this disability. If it could be proved that the varicose condition was existing at the time the policy was applied for or that previous ulcers had been present and no mention of these facts were made in the application, the company could decline the claim on the grounds of "breach of warranty" and have sufficient cause to defend its action.

TOTAL DISABILITY: Abrasions involving the posterior surface of the leg seldom cause any disability unless a varicose

vein is ruptured or an ulcer forms, when total disability in all classes of risks may last from 1 to 2 or 4 weeks. This time may not be covered by the policy on account of fraud in omitting to state the existence of such a condition on the application for insurance. Contusions in the same place may require from 3 to 7 days of total disability in individuals whose occupation requires the erect position. Abrasions or contusions involving the anterior surface of the leg in which the underlying bone has been injured, require from 1 to 3 weeks of total disability in all classes of risks; this time depending on the exact duties of the occupation. Superficial abrasions or contusions to the anterior surface involving the skin and muscular tissue only, cause total disability of 2 to 5 days in individuals whose occupation requires much walking. Fraudulent claims alleging disability as due to an abrasion seldom demand indemnity for over 1 or 2 weeks, and of course are never entitled to any.

PARTIAL DISABILITY is not often deserved in abrasions and contusions which involve the sides or posterior surface of the leg. When total disability has existed previously, from 1 to 2 or 3 weeks are sometimes necessary following these injuries and the abrasion or contusion has involved the anterior part of the leg. Individuals on whom an ulcer forms after an abrasion or contusion may require partial disability of 2 to 4 or 6 weeks,—if the company is liable for indemnity.

EFFECTS: Superficial abrasions and slight contusions to any part of the leg below the knee leave scars only. If the abrasion or contusion has been severe and injured the anterior surface of the tibia, necrosis of the bone may ensue, but as this is a remote condition, the individual is insurable for all kinds of insurance as soon as recovery takes place.

INCISIONS AND LACERATIONS OF THE LEG

INFORMATION: Incised and lacerated wounds of the leg below the knee are frequent. Incisions to this part of the body do not cause much disability unless a number of deep cuts exist at the same time. Fraudulent claims alleging disability as due to incisions to the leg not uncommonly occur. Lacerated wounds are more often met with than incisions, and in some cases this class of wounds is nothing more than deep and severe abrasions. Disability is much longer if these wounds involve the anterior sur-

face of the leg with an injury to the underlying bone, than if the posterior or lateral surfaces are wounded.

SIGNS AND SYMPTOMS: Pain either accompanies or follows the infliction of incised or lacerated wounds; there is bleeding, swelling, and when the wound is an incision and has been deep, separation of the wound edges occurs, while in a laceration the edges are torn and uneven. Lacerated wounds are especially prone to infection, and if the laceration or incision has been deep and transverse, some impairment of motion may result. If the tendo Achilles is severed in an incision, partial loss of extension of the foot results.

DIFFERENTIAL DIAGNOSIS: *Fraudulent Claims* alleging disability to be due to incisions show a number of superficial cuts on the inside of the leg starting from the lower extremity and running upward and backward. These cuts sometimes are nothing more than mere scratches. Very rarely does the incision extend deeper than the skin, while incisions that are received accidentally and result in disability, are deep and require sutures for bringing the edges in apposition and may be found on any part of the leg, more frequently the outer surface and extending transversely or obliquely across. Self-inflicted incisions may be infected by the use of some poisonous substance as rubbing a piece of brass or copper over the wound; in which case only a part of the incision is primarily infected, and generally the part which is not involved heals without showing evidence of this condition.

COMPLICATIONS: *Deep Incisions and Lacerations* occurring to the anterior surface of the leg may cut or destroy the periosteum of the tibia and result in infection and prolonged disability. Incisions near the knee or ankle joint may enter these articulations and be followed by infection and partial or complete ankylosis.

TOTAL DISABILITY following severe incisions or lacerations in preferred risks lasts from 1 to 2 weeks, when the individual must remain standing or walking the greater part of the day. In the same class of risks when the occupation permits a sitting position, from 3 to 7 days are sufficient. Ordinary risks are not often totally disabled more than 1 week in this class of injuries unless the wounds are very deep and extensive, when from 2 to 3 weeks are sometimes necessary. If an incised or lacerated wound is on the anterior surface of the leg and is complicated by an injury to the bone or its covering, total disability is increased in all classes

1 to 2 weeks. If either of these wounds enter the knee or ankle joint and are followed by infection, total disability may last from 3 to 6 weeks.

PARTIAL DISABILITY is the most usual form of indemnity payable following incised or lacerated wounds involving this part of the body and 1 to 3 weeks is the time generally demanded in all classes. If the injury is on the lateral or posterior surface of the leg, both forms of disability are shorter than if the anterior surface is involved.

EFFECTS: Deep incisions or severe lacerations leave scars, but this does not impair the risk for any form of insurance. When the tendo Achilles has been severed and extension of the foot is lost, the risk is not insurable for an accident policy, but may be considered for life or health insurance.

PUNCTURED WOUNDS OF THE LEG

INFORMATION: Punctured wounds involving the leg, knee or ankle joint are usually due to animal bites or the result of gunshot injuries. These punctures may also be caused by a sharp-pointed object entering the tissues, such as nails, pitchforks, splinters, etc. This class of wounds involving the soft tissues of the leg only do not cause much disability, but when the knee or ankle joint has been entered, infection invariably occurs and disability is greatly prolonged. Gunshot wounds to the articulation of the knee or ankle are serious injuries and leave permanent deformity and disability;—if they do not cause an amputation.

SIGNS AND SYMPTOMS depend on the character of instrument causing the puncture. In all cases, however, there is a point of entrance and when the wound is a perforating one the point of exit is apparent; bleeding is present, with swelling and redness surrounding the opening in the skin. Sometimes a part of the instrument causing the wound remains and when due to gunshot injuries, powder may be imbedded in the skin around the opening. Shock is present in all gunshot injuries and is more severe when the missile enters the knee or ankle joint. Infection usually follows in these cases and not only greatly prolongs disability, but in many cases causes loss of motion in the joint. Punctured wounds involving these articulations present signs and symptoms of a joint injury; pain is more severe on movement, and if the wound is in the knee or ankle joint, a discharge of syno-

vial fluid may be noticed. If either of the bones of the leg are fractured by the instrument causing the puncture, there is evidence of such injury; unnatural mobility, crepitus, splintering of the bone and inability to rest any weight on the foot of the injured side. Animal bites show marks of the teeth on each side of the wound and sometimes the tissues are torn out.

COMPLICATIONS: *Complete or Partial Fractures* of the tibia or fibula follow gunshot injuries when the missile strikes the

Fig. 68.—Skiagraph of knee-joint showing wound by Remington bullet which traversed joint and lodged in upper end of the tibia. (American Text Book of Surgery).

bone. Disability in such cases is greatly prolonged and deformity usually results and in many cases permanent shortening of the leg.

Joint Injuries are the most serious complications in connection with punctured wounds, and this is especially true if the knee joint has been involved. This articulation is the most complicated one of the body and if the instrument which causes the puncture enters it, disability is greatly prolonged by succeeding infection. If the puncture is due to a gunshot wound and the bullet destroys some of the important ligaments inside the joint,

this with the resulting synovitis invariably leaves more or less impairment of motion. Punctured wounds involving the ankle joint which are followed by infection and diminished movement, often recover fairly well on account of the constant motion which is present as the individual walks.

Hydrophobia may follow an animal bite to this or any other part of the body, and when it is suspected that the bite is from a rabid animal of any kind, the Pasteur treatment should be taken at once. For other information concerning this complication, see description of Hydrophobia.

Septicemia sometimes follows apparently simple punctured wounds; the infection of course entering the tissues at the time the puncture is made and not developing until later, when the wound becomes tender and painful. Infection of the lymphatics is indicated by red lines extending up the leg and thigh and induration of the glands of the groin which are tender and painful. Irregular fever with loss of appetite and sleeplessness, are some of the signs and symptoms indicating this complication.

TOTAL DISABILITY in all classes of risks is practically the same, with the exception that in some preferred risks whose duties are performed at the desk, the period of total disability is 1 to 2 weeks shorter. Simple punctured wounds involving the soft tissues of the leg when uncomplicated except by infection, seldom cause any total disability. The same class of wounds entering the knee or ankle joint and followed by infection, produce total disability of 2 to 4 weeks according to the joint injured and the degree of infection. Gunshot wounds involving the soft tissues of the leg require from 1 to 3 weeks of total disability. If either bone is involved, from 6 to 10 weeks may be necessary. When the knee joint is injured by explosives or bullets, total disability lasts from 6 to 10 or 14 weeks. Punctured wounds to the ankle joint when due to gunshot injuries cause total disability of 6 to 10 weeks.

PARTIAL DISABILITY lasts from 1 to 2 or 3 weeks following animal bites which occur to the soft tissues of the leg only. Individuals who have suffered from a gunshot wound involving the bones of the leg or the knee or ankle joint, require from 2 to 4 or 6 weeks of partial disability according to the location of the injury, the duties of the occupation and the resulting deformity or impairment of motion.

EFFECTS: Punctured wounds which do not injure the

joints or bones of the leg, leave no permanent deformity or disability. If the joints have been entered or the bones fractured, there may be permanent deformity and disability, but unless this is so extensive that the individual would be handicapped in performing the duties of his occupation or protecting himself when necessary, insurance of all kinds could be written from three to six months after recovery.

BURNS AND SCALDS OF THE LEG

INFORMATION: Burns and scalds occurring to either of the lower extremities below the knee are usually seen among ordinary risks, and especially those who work in foundries or where metal of any kind is reduced to the liquid state. These injuries are severe, for the reason that the molten metal splashes on the parts and burns through the clothing and is then confined. Steam and hot water also causes severe scalds to these parts.

SIGNS AND SYMPTOMS: If the burn or scald has been extensive, shock is always present; in addition there is pain, tenderness, redness and swelling of the parts which are either covered by blisters or sloughing. The destruction of the skin and muscles occurs by carbonization, when overheated metals come in contact with this or any other part of the body.

COMPLICATIONS: *Acid Burns* or those from molten metal sometimes penetrate either the knee or ankle joint, when infection follows and stiffening or complete ankylosis of the joint is the result. When these complications occur, disability is greatly prolonged and permanent deformity and impairment of the risk is the usual outcome.

TOTAL DISABILITY in preferred risks suffering from superficial burns or scalds of the leg in which an area not more than one to three inches in diameter is involved, lasts from 5 to 10 days. Ordinary risks with the same degree of burn require from 1 to 2 weeks. Moderately severe burns with a considerable area of skin destroyed or a number of small deep burns, require from 2 to 4 weeks of total disability. Ordinary risks under the same conditions demand from 3 to 6 weeks. Very deep burns or scalds which have caused much sloughing of the tissues in all classes of risks require from 6 to 12 weeks of total disability.

PARTIAL DISABILITY of 1 to 2 or 4 weeks usually follows burns of all degrees of severity, the time depending on the

occupation, severity, location of the injury and the area of tissue destroyed.

EFFECTS: All burns and scalds leave scars and when the cicatrix is large and depressed, contraction follows and in many cases permanent deformity and disability is the result. These scars when situated on the lateral and posterior surfaces of the leg do not often cause permanent disability, but when found in connection with the knee joint or the anterior or lateral surface of the ankle joint, contraction may be so pronounced that permanent deformity and impairment of motion results and the individual is unable to walk properly. Such cases are impaired risks and are not insurable for accident insurance, but a life or health policy may be safely issued from three to six months after complete recovery. Burns and scalds to the leg which leave scars only, permit insurance of all kinds to be issued as soon as recovery takes place.

ABRASIONS AND CONTUSIONS OF THE FOOT AND TOES

INFORMATION: Abrasions seldom occur to the foot or toes unless the individual is barefooted for some reason or other; this part of the body being protected the greater part of the time by shoes. Contusions are incurred when heavy articles such as trunks, boxes, etc., fall on these parts. Contusions are also sustained by knocking the bare foot or toes against an object in the dark. Abrasions resulting from the continued rubbing of a shoe against the foot are not accidental in origin and are not covered by an accident policy. If disability results from such a cause and a general health or disability policy is carried, then indemnity is payable for the loss of time resulting from such a condition.

SIGNS AND SYMPTOMS: Abrasions unless severe produce practically no symptoms and only an abraded surface which is accompanied by slight bleeding and followed by scabbing. Contusions are followed by pain, tenderness, considerable swelling and extensive discoloration which sometimes involves all the toes or foot after a moderately severe blow has been received. Pain is made worse by walking or in any position in which weight is put on the injured member. If the force of the blow producing the contusion has been severe enough to rupture the skin of the toes or foot, there is evidence of such. Discoloration under the nails

of the toes occurs, the same as under the nails of the fingers or thumb.

TOTAL DISABILITY in all classes of risks suffering from abrasions of the foot or toes seldom follows unless the duties of the occupation require constant walking, when 1 to 3 days may be necessary if the injuries are very numerous and deep. Contusions involving the toes or foot in which much swelling and discoloration occur and which border closely on sprains of some of the joints of the foot, require from 3 to 7 days of total disability in all classes of risks. If the contusion ruptures the skin of the toes or foot, total disability in preferred risks last from 1 to 2 weeks. Ordinary risks require from 2 to 3 weeks.

PARTIAL DISABILITY is the usual form of indemnity demanded following abrasions and contusions of the foot, and preferred risks require from 1 to 2 weeks, depending on the severity of the injury and the exact duties of the occupation Ordinary risks are not often entitled to this form of disability.

EFFECTS: None.

INCISIONS AND LACERATIONS OF THE FOOT AND TOES

INFORMATION: Incisions involving the foot or toes do not often occur, except when the individual is not wearing shoes for some reason or other. Lacerations follow severe injuries to the foot in which that member is caught between hard objects and twisted, torn or mangled. Mutilation of the foot by cutting or chopping off a part of one of the toes is not uncommon among malingerers.

SIGNS AND SYMPTOMS: Incised wounds of the foot produce pain, bleeding, suppuration of the wound edges, and if the incision has been sufficiently deep and severed some of the tendons, loss of flexion or extension is present in the muscles involved. Lacerations of the foot or toes when produced by machinery are followed by severe pain, tenderness, hemorrhage, much swelling, discoloration and mangling of the tissues. These cases are almost invariably badly infected at the time the injury occurs and are followed by suppuration which greatly prolongs disability and results in permanent deformity or an amputation of some of the parts involved. Nausea, often vomiting, weakness, and sometimes fainting, immediately follow these injuries. A

certain degree of shock is also present when the laceration of the toes and foot has been extensive.

DIFFERENTIAL DIAGNOSIS: In fraudulent claims only a small part of a toe is intentionally amputated and mutilation is usually confined to one of the four outer toes, the great toe of the foot seldom being injured in this manner. Fraudulent claimants are sometimes seen suffering from a mutilation of a toe in which one or more toes of the same foot have been lost. If the foot on the opposite side is examined, the same condition is usually present. These claimants often allege that the accident occurred under conditions which would double the indemnity and witnesses are never present. Sometimes evidence of an amputation of part of the fingers of either hand is also seen and is claimed to have been caused by an accident.

COMPLICATIONS: *Infection* invariably follows lacerated wounds of these parts and is a common complication of incised wounds. If the laceration has been severe and some of the toes or foot are so badly injured that an amputation is necessary, a deformed foot is the result and some degree of permanent disability ensues.

TOTAL DISABILITY following incisions to the foot or toes depends on the occupation of the claimant and the location of the incision. Incised wounds in all classes of risks, on the upper surface of the foot or toes running longitudinally, require from 3 to 7 days of total disability. When the incision is transverse and some of the extensor tendons severed, total disability lasts from 2 to 3 weeks in all classes. Longitudinal incisions of the plantar surface of the foot demand from 1 to 2 weeks of total disability in all risks. If the incision is transverse and some of the flexor tendons of the toes have been severed, total disability lasts from 2 to 4 weeks in all claimants. Infection in these cases prolongs the above time 1 to 2 weeks, and if an operation is done for suturing the severed ends of the tendons together and is performed immediately after the accident, this period of disability is not increased. Moderately severe lacerations involving the toes only require 1 to 2 weeks of total disability in preferred risks. Ordinary risks demand from 1 to 3 weeks under the same condition. If the laceration is severe and involves the foot, total disability in preferred risks lasts from 2 to 4 weeks. Ordinary risks require from 4 to 6 weeks following these severe lacerations. If an amputation of any part of the foot is performed, disability is pro-

longed according to the time described under amputation of the particular part.

PARTIAL DISABILITY in preferred risks lasts from 1 to 2 weeks following incisions which have severed some of the tendons or moderately severe lacerations. Severe lacerations which have caused a considerable period of total disability may require from 2 to 4 or 6 weeks of partial disability in preferred risks. Ordinary risks do not often ask for partial disability, but if the occupation requires considerable walking and the claimant is insured under this classification from 2 to 4 weeks of this form of disability may be demanded.

EFFECTS: Incisions and lacerations to the foot or toes in which the tissues have not been destroyed or the tendons severed, leave no permanent deformity or disability; the risk being insurable for all kinds of insurance as soon as recovery is complete. If the incision divides some of the tendons and loss of motion results or the laceration causes permanent rigidity of some of the joints, the individual may not be insurable for an accident policy, but usually such a condition is not sufficient for withholding this form of insurance. Should the laceration result in an amputation of some of the toes or part of the foot, it would be necessary to consider each case separately.

PUNCTURED WOUNDS OF THE FOOT AND TOES

INFORMATION: Punctured and perforating wounds of the foot in which the point of entrance is on the plantar surface, are generally due to stepping on some sharp object, such as nails, tacks, pins, etc. Punctured wounds of the toes from the under surface are usually caused by pins and needles. Gunshot wounds involving the foot or toes most frequently show the point of entrance from the upper surface, as these injuries are often due to the accidental discharge of firearms, the bullet passing through the extremity of the individual holding the gun or revolver. These wounds are almost invariably infected, and in many cases tetanus supervenes. In punctured wounds of the foot which are almost or entirely healed in one or two weeks and are followed by tetanus, producing an extended period of total or partial disability and in many cases resulting in death, the question of liability is an important one.

SIGNS AND SYMPTOMS: In punctured wounds on the

plantar surface, the point of entrance is evident, and if the instrument passes entirely through the foot, its exit is seen on the upper part. There is pain, tenderness, swelling and inability to rest weight on the foot without increased pain. Gunshot injuries produce more severe signs and symptoms, including evidence of contusion and laceration to the parts. Fractures of the bones of the foot frequently follow this class of injuries, when there is crepitus on movement and other signs of a break in the continuity of the bone involved. Sometimes a part or the whole of a toe is shot off as the result of a discharge of firearms. More or less shock accompanies this class of injuries; the severity depending on the constitution of the individual.

COMPLICATIONS: *Infection* is almost sure to follow a punctured wound of any kind involving the foot or toes; the degree of this depending on the micro-organisms which gain access to the circulation through the opening accidentally produced. On account of the rarity of a punctured wound to the foot or toes not being infected, the length of total and partial disability as given implies this form of infection.

Tetanus is very common following punctured wounds to this part of the body and is due to the bacillus of tetanus which gains entrance to the circulation at the time the injury is inflicted. The period of incubation for this germ is about two weeks; therefore the disease does not show itself until about that time; in the meanwhile the primary injury may have entirely healed. If this disease ensues after a punctured wound, total disability is increased. If an insurance company has paid total or partial disability for a punctured wound and has secured a release, it is hardly possible that any court would rule that the company is still liable, if another period of total or partial disability ensues or death results from this complication. Liability in cases where a release has not been obtained and this disease follows and causes disability or death, may be denied by an insurance company,—if the disability has not been continuous from the date of accident. Insurance companies, however, usually look at this complication in a broad light and pay for the full length of time disability results, counting from the date of accident up to and including the duration of the complication.

TOTAL DISABILITY in all classes of risks lasts from 1 to 3 weeks from a punctured wound occurring to the plantar surface of the foot. Gunshot wounds require from 2 to 4 weeks of this

disability, and if a bone has been fractured, from 4 to 6 weeks are necessary. When a gunshot injury fractures a bone of the foot in preferred risks, total disability is sometimes 1 to 2 weeks less than the above. If an amputation of any part of the foot or toes is performed, see amputation of these parts.

PARTIAL DISABILITY of 1 to 3 weeks is allowable to preferred risks following these injuries, the length of time depending on the occupation of the individual. Ordinary risks are not often entitled to any partial disability, as it is necessary for them to be completely recovered before returning to work.

EFFECTS: If tetanus does not follow the injury and recovery ensues without permanent disability or deformity of the foot, the individual is insurable for all kinds of insurance from three to six months after the date of accident. Should tetanus supervene and recovery follow from this disease, the individual would hardly be considered insurable for any kind of insurance until one year after the accident.

BURNS AND SCALDS OF THE FOOT AND TOES

INFORMATION: Burns and scalds of the foot and toes are usually the result of steam, molten metals or boiling liquids gaining access to the surface of the skin under the clothing and running down into the shoes and confined there. These injuries are generally very severe on account of this condition and most frequently occur in ordinary risks whose occupation requires them to handle liquid metals or work where steam and hot water are used.

SIGNS AND SYMPTOMS: Severe pain immediately follows infliction of a burn or scald, with great swelling which necessitates removal of the shoe by cutting it away. Blisters and sloughing follow scalds from hot liquids or steam, while destruction of the tissues ensues after contact with molten metal. There is tenderness and inability to rest any weight on the injured foot, together with shock which is present in the majority of cases.

COMPLICATIONS: *Severe and Deep Burns* involving this part of the extremity may result in some of the tendons being destroyed or the toes so badly burnt that amputation results. One of the numerous joints may be opened by the injury when infection and stiffening follow; contraction of the scar tissue which

forms after these severe burns or scalds always leaves some deformity and limits motion in the foot or toes.

TOTAL DISABILITY lasts from 1 to 2 weeks in all classes of risks when the burn is superficial and extends over a small area on the anterior surface of the foot. Moderately severe burns involving the plantar surface require from 2 to 4 weeks of this disability. Deep burns to any part of the foot in which destruction of tissue occurs, require from 6 to 10 weeks of total disability; this time depending on the exact location of the injury, the degree of severity and any complications which may ensue. Burns or scalds involving the toes only, seldom cause total disability longer than 1 to 2 weeks in all risks.

PARTIAL DISABILITY is payable to preferred risks in addition to the above and from 1 to 4 or 6 weeks are necessary; this time depending on the duties of the occupation. Ordinary risks do not often ask for this form of disability.

EFFECTS: A scar always results from a burn, and if the injury has been at all severe, it may be adherent to some of the tendons or underlying tissue, and as it contracts, deformity and limitation of movement follow. If these injuries are not so severe that deformity and permanent disability results, the individual would be insurable for any kind of a policy from three to six months after complete healing of the injured surface. Burns or scalds resulting in such great deformity that permanent disability follows, would preclude the individual from obtaining accident insurance, but a life or health policy could be safely issued when recovery is complete.

PART II

ACCIDENTS TO THE JOINTS OF THE LOWER EXTREMITY

SPRAINS AND DISLOCATIONS OF THE PUBIC AND SACRO-ILIAC ARTICULATIONS

INFORMATION: Sprains or dislocations involving the articulations between the two pubic bones in front or between the sacrum and the ilium behind, do not occur frequently, and if seen

are the result of a crushing force, such as results when the body is run over by a heavy vehicle or caught between moving objects.

SIGNS AND SYMPTOMS: External evidence of the injury is usually apparent, although sometimes an automobile will pass over an individual and leave no visible evidence. If the injury is a sprain, pain is complained of in the injured articulation and this is made worse by movement in any direction of the lower extremities, resting the weight of the body on them or by pressing the sides of the pelvis together. There is tenderness on pressure over the pubic or sacro-iliac joints and swelling which is followed by discoloration.

DIFFERENTIAL DIAGNOSIS: *Tuberculosis of the Sacro-iliac Joint* may exist and be aggravated by a fall or twist in which a sprain involving this joint occurs. Tuberculosis in this situation is uncommon, and when present, usually affects young adults. Pain, swelling and redness are complained of, but no discoloration as is seen in acute injuries. Apparent lengthening of the limb on the diseased side exists and is not present in a sprain. Disability as the result of an accident to an already diseased joint would not be covered by an accident policy.

COMPLICATIONS: *Dislocations* of the pubic bones prevent the individual from standing in the upright position, there is a range of movement of about an inch at a place where a joint should not exist. Sacro-iliac dislocations almost never occur without more serious injuries.

Fracture of some of the bones forming the pelvis or the coccyx is not unusual after this class of injuries and is best diagnosed by means of the x-rays. Injury to some of the organs of the abdomen, such as a rupture or contusion of the bladder or some of the other contents, frequently occurs at the time the accident happened. If these internal injuries complicate sprains or dislocations of these joints, the signs and symptoms characteristic of the part injured follow immediately after the accident.

TOTAL DISABILITY of 2 to 6 weeks is necessary in sprains or dislocations of these joints; this time depending on the number of ligaments torn and the degree of severity. If the pubic articulation is badly injured, wiring of the bones together may be necessary, when total disability will continue 4 to 6 weeks after the date of operation.

PARTIAL DISABILITY is payable to preferred risks after severe sprains or dislocations of these articulations and may last

from 2 to 4 weeks. Ordinary risks are not often entitled to any partial disability, for the reason that the length of total disability is long and the individual does not return to work until fully able to do so.

EFFECTS: Uncomplicated sprains or dislocations involving these joints leave no untoward effects and the individual is insurable for any kind of insurance from one to two months after the date of recovery. If fractures or injury to some of the internal organs complicate these injuries, each case must be considered separately and all kinds of insurance must be denied the individual until it is known positively that recovery has been complete, and this cannot usually be ascertained until after a careful medical examination has been made.

SPRAIN OF THE HIP JOINT

INFORMATION: This articulation is a ball-and-socket joint and the head of the femur fits into the cavity of the pelvis so perfectly and is so well covered by muscular tissue that sprains of this articulation seldom occur. These injuries are produced by falls, forcible inversion or eversion of the leg, extreme flexion or hyper-extension of the thigh.

SIGNS AND SYMPTOMS: History of an accident in which the leg has been violently moved as above described, together with pain and tenderness in the joint, form the basis for the diagnosis of a sprain in this joint. Swelling may be so deep seated that it is not evident and discoloration so late in appearing that the diagnosis must be made long before. Inability to move the hip or thigh or rest any weight on the injured side without great pain is always present.

DIFFERENTIAL DIAGNOSIS: *Rheumatism* may first attack this joint, when all the tissues surrounding the articulation are exceedingly painful; there is redness, localized heat, increased body temperature and the slightest movement in any direction causes excruciating pain. If this disease exists with a history of an accident which might cause a sprain, by waiting a short time some of the other joints of the body will be involved and then the diagnosis is easily made.

Tuberculosis is more frequent in this articulation than in any other joint of the body; it is more common in children, but is sometimes seen in adults. Traumatism is given by some authors

as a probable cause of this disease, but from the fact that it is due to a specific micro-organism any injury of the kind that would produce the disease could in no way ingraft the bacillus of tuberculosis inside the joint, it would seem that hip joint disease could not possibly arise as the result of an accidental injury unless tuberculosis was existing in some other part of the body. This disease

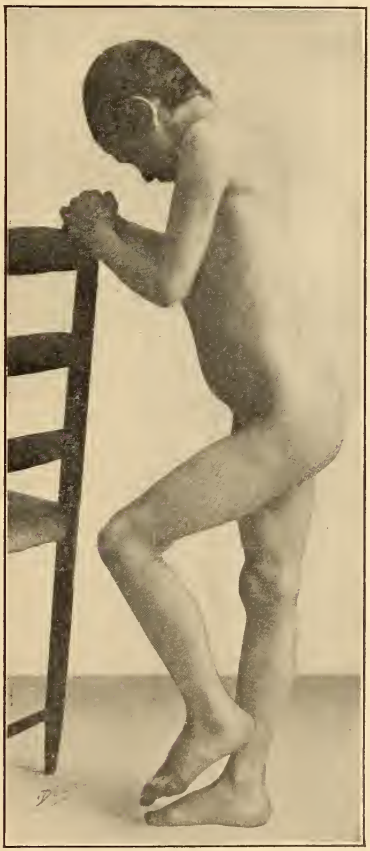


Fig. 69.—Position in hip-joint disease, side view. (Fowler).

is usually described under three stages, and if claimed as the result of a sprain or contusion, it would be seen in the second or third stage and the differential diagnosis at this time between an injury and this disease should not be difficult. Hip joint disease is always accompanied by swelling, muscular wasting, pain in the joint which is worse at night and when the leg is moved, slight tender-

ness on pressure, and if partial ankylosis has occurred, tilting of the pelvis follows on flexion and extension of the thigh. Should the disease go to the formation of an abscess, this is generally situated in front of the joint, when the usual signs and symptoms of such a condition manifest themselves.

Fig. 70.—Position in hip-joint disease, rear view. (Fowler).

COMPLICATIONS: *Fractures* of some part of the femur may complicate a sprain of this joint, and if such a case is met with, the length of disability is governed by the more severe injury.

TOTAL DISABILITY in preferred risks following a sprain of this articulation lasts from 1 to 3 weeks. Ordinary risks are usually totally disabled 2 weeks, although this time may be extended to 3 to 4 weeks; this depending on the severity of the sprain and the occupation of the individual.

PARTIAL DISABILITY of 1 to 3 or 4 weeks is payable to preferred risks whose occupation requires much walking or the standing position. Ordinary risks are rarely entitled to partial disability.

EFFECTS: None; the individual being insurable for all kinds of insurance as soon as recovery ensues.

DISLOCATIONS OF THE HIP

INFORMATION: The hip joint is the best example of a ball-and-socket joint in the body, and dislocations are not frequent on account of the almost perfect apposition of the head of the femur with the acetabular cavity and the great strength of the capsular ligament of this joint which is reinforced by the inverted Y shaped ligament. The large and strong muscles which surround this joint assist in keeping the head of the bone in position. These dislocations may occur in different directions; the most common, however, are those which go upward and backward, backward, downward, and inward; the first of which is known as the dislocation of the dorsum of the ilium and forms about one-half of the dislocations. The production of these injuries requires violent and severe force which twists or pushes the head of the bone out of its articular cavity and through the capsular ligament. The weakest point of the ligament is on the under and inner surfaces, and so also is the weakest part of the rim of the acetabular cavity at its lowest margin; therefore the head of this bone most frequently takes this route when leaving its usual habitat.

SIGNS AND SYMPTOMS depend on the position in which the head of the bone is found. In all dislocations there is severe pain, inability to support any weight on the injured side and tenderness on pressure; the head of the bone is absent from its usual position and a great nodular swelling at another part represents it; from one to three inches shortening of the leg with inversion of the foot and the head of the bone found above Nélaton's line occurs in the majority of dislocations; partial flexion of the thigh

on to the abdomen, relaxation of the muscles of the thigh and loss of motion in the joint are usual.

DIFFERENTIAL DIAGNOSIS: *Extra Capsular Fractures* which are commonest in young adults and result from violence directly applied over the great trochanter are sometimes mistaken for dislocations. With these injuries, tenderness over the great trochanter is extreme, crepitus is sometimes elicited, although not always, being absent if an impacted fracture exists. There is

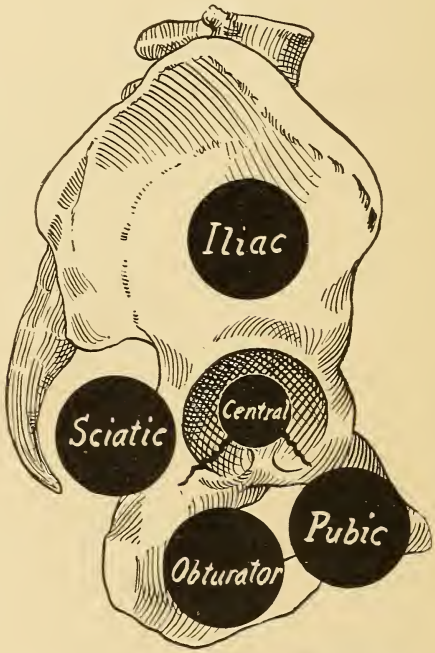


Fig. 71.—Location of head of femur in various forms of dislocation of the hip. (Eisendrath).

eversion of the foot and loss of motion in the joint, with an altered arc of rotation of the great trochanter. The use of the x-rays serves to make the diagnosis between a dislocation or fracture and should always be used if possible in this class of injuries.

Hip Joint Disease may be existing when a slight twist or injury to this articulation results in a dislocation. If such a condition arises, an insurance company would not be liable for the disability which would ensue, for the reason that the dislocation while due to an injury would not have occurred if the disease was not previ-

ously existing. The differential diagnosis of this disease is given under Sprains of this articulation.

Congenital Dislocations of the hip when unilateral, might be alleged to have resulted from an accident, but the absence of severe pain, tenderness and discoloration together with movement in the

Fig. 72.—Dislocation of the right hip-joint showing the head of the femur resting upon the dorsum of the ilium with characteristic attitude. (Scudder).

false joint without much pain and ability to walk, stand in the upright position or bear weight on the so-called injured side, would be sufficient to prove that the dislocation was not a recent one. Evidence could be obtained of such an individual having been seen walking with a waddling gait and this would help to show that the dislocation was of long standing.

COMPLICATIONS: *Fractures* involving the neck or that

part of the bone between the head and the great trochanter of the femur, sometimes complicate dislocations of the hip joint and are diagnosed as above described. If a fracture exists in conjunction with a dislocation, disability is greatly prolonged and is governed by the time required for union between the fragments.

TOTAL DISABILITY lasts from 3 to 6 weeks in preferred

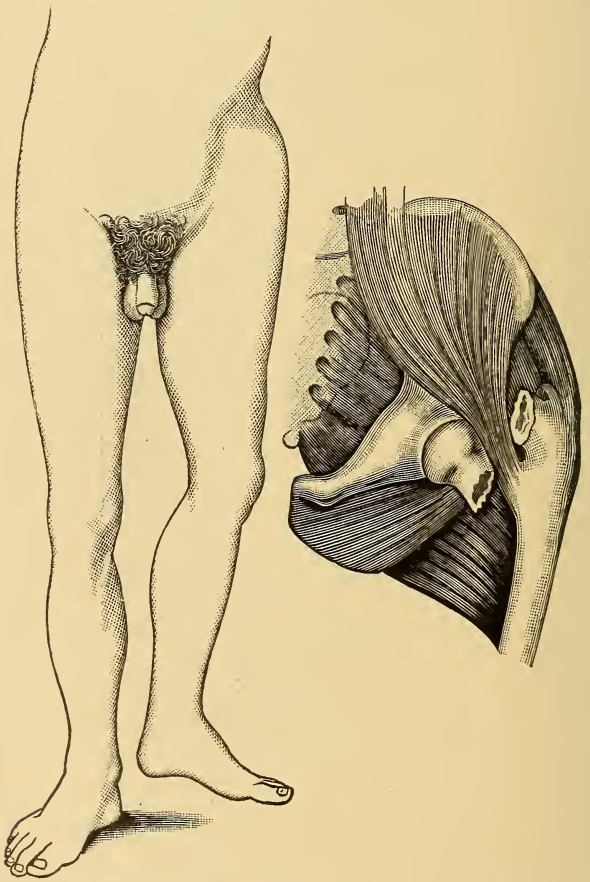


Fig. 73.—Fracture of the neck of the femur or thigh. (Berg).

risks suffering from any form of dislocation of this joint which is uncomplicated by other or more severe injuries. This period of disability is increased 1 to 3 weeks in this class, when the occupation requires the individual to be in the erect position during business hours. Ordinary risks are totally disabled from 6 to 8 weeks following this injury.

PARTIAL DISABILITY of 2 to 6 weeks is sometimes payable to preferred risks when the duties of the occupation require considerable walking or traveling. If office duties only are performed by the claimant, 1 to 3 weeks are sufficient. Ordinary risks are not often entitled to any partial disability.

EFFECTS: Individuals having suffered from any form of dislocation of the hip are not insurable for accident insurance until six to twelve months have elapsed after recovery, but life or health insurance could be safely written from three to six months after the date of accident,—unless some complication existed with the dislocation.

SPRAINS OF THE KNEE JOINT

INFORMATION: Sprains of this articulation are very frequent and are due to direct force such as falls on the knee or indirect force as the result of twisting, pulling, forcible extension or flexion. This joint is the most complicated one of the body and even slight accidents to it cause disability seemingly out of all proportion to the injury. Claims arising from sprains of this articulation are prolonged in many instances by the individual attempting to continue the occupation after the accident has occurred.

SIGNS AND SYMPTOMS: Pain in the joint is aggravated on movement and especially by flexion, and gradually becomes worse as long as the individual attempts to use the injured knee, and in some cases redness of the skin follows and persists from twelve to twenty-four hours and then disappears. Swelling is always present and is due to a collection of fluid inside the articulation, causing the patella to float. Tenderness on pressure is apparent over certain spots surrounding the knee joint, these places indicating the parts of the ligaments that have been torn and lacerated. Discoloration always ensues and is especially marked on the posterior surface of the joint in the popliteal space when the posterior or lateral ligaments have been involved. In severe sprains, individuals are unable to rest the weight on the injured leg and limited motion is evident.

DIFFERENTIAL DIAGNOSIS: *Acute Articular Rheumatism* may start in this joint, the time being coincident with an injury and result in a claim in which it is alleged that a sprain is the cause of disability. In this disease, time will always make the

differential diagnosis, but if it is important that it be made at once, it can be remembered that redness, swelling and heat are characteristic signs of rheumatism, and while redness may also exist in a sprain, it usually disappears within twenty-four hours; tenderness is present in both, but in rheumatism every point within four to six inches of the joint is exceedingly tender and painful, while in sprains tenderness exists in spots only; swelling in a joint affected with rheumatism is in the cellular and muscular tissues, while in a sprain it is usually inside the joint and the contour is not altered to any great extent.

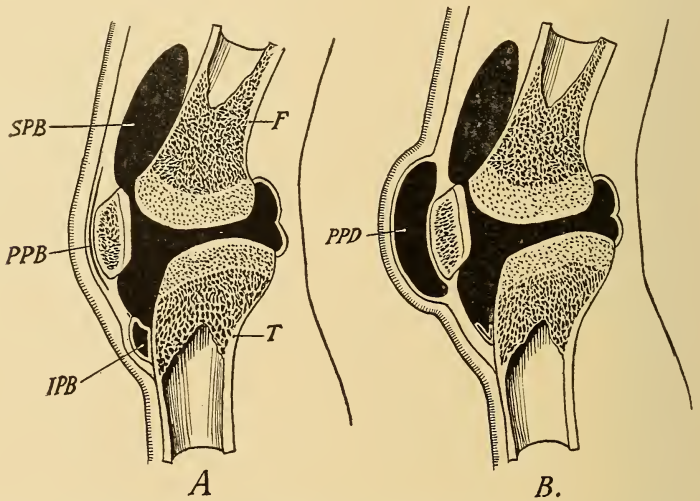


FIG. 74.—LOCATION OF VARIOUS COLLECTIONS OF FLUID IN THE VICINITY OF THE KNEE-JOINT. (Eisendrath).

A, Effusion into the knee-joint, and suprapatellar bursa: F, Femur; T, tibia; SPB. suprapatellar bursa; PPB, location of prepatellar bursa; IPB, infrapatellar bursa. B, This illustration shows the simultaneous collection of fluid in the prepatellar bursa (PPB), and within the knee-joint itself.

Gonorrheal Arthritis can be claimed as a sprain of the knee joint. This disease is most frequent in men and usually occurs in the declining stage of a specific urethritis; therefore if a sample of urine is obtained, evidence of gonorrhea will be found. The swelling which occurs in the joint affected in this manner is generally very extensive and is not accompanied by discoloration. If a claim is made on an insurance company alleging a sprain of this articulation and this disease exists at any stage and can be proved by an examination of the urine and other means, the company would not be liable for the disability which might ensue on account of a gonorrheal arthritis developing in either of the knee

joints, as the policy specifically states that indemnity is not payable unless the disability is caused by an accident; and even though there might be a history and evidence of an accidental injury to the knee involved, the fact that the injury would be complicated by the disease would invalidate the claim.

Tuberculous Disease of this articulation is next in frequency to tuberculous hip joint disease. If disability from this disease is

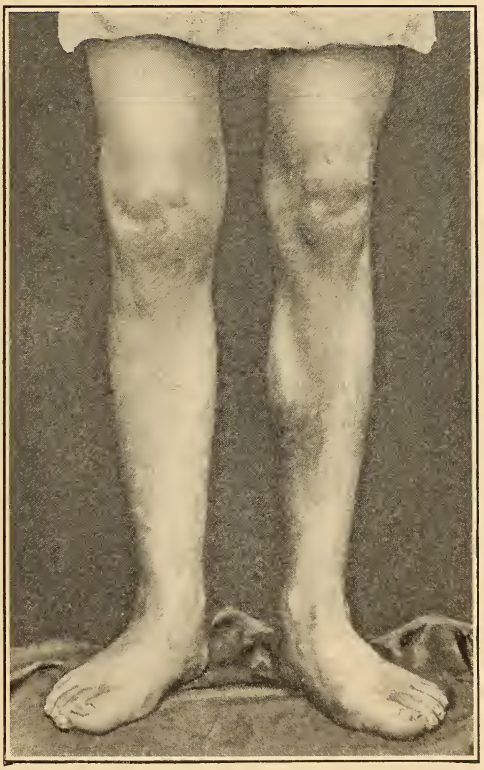


Fig. 75.—Distention of the right knee-joint with fluid following a sprain. (Berg).

claimed as due to a sprain, it can be diagnosed by the fact that in a sprain the leg is always in extension, while in this disease partial flexion is constantly present. The swelling which surrounds the joint becomes extensive and gives it a spindle-shaped appearance. Muscular spasm is marked in this disease and is not present in sprains; pain is severe in a sprain, while in this disease it is slight and the characteristic discoloration of the skin in a sprain following the effusion of blood from an injury is not present.

COMPLICATIONS: *Partial or Complete Dislocations* of the patella sometimes complicate an ordinary sprain of this joint, and if present, the length of disability would be determined in such cases by the complication rather than the sprain.

Fractures involving the patella or some of the processes of the bones forming this articulation may occur at the time the sprain is sustained, but are usually not diagnosed unless the x-rays are employed. If a fracture of the patella exists, the length of disability is governed by the time required for the repair of this bone, either by nature or an operation. Small chips of bones when broken off the large bones forming the joint, prolong disability and are not often diagnosed until after the length of time required for a sprain to recover has ended and disability is still present.

TOTAL DISABILITY lasts from 5 to 10 days following slight sprains and contusions of the knee joint in preferred risks whose duties are performed at a desk. In the same class from 1 to 3 weeks are necessary when walking is required. If the sprain has been severe and considerable fluid has been effused into the joint, this disability may persist from 2 to 4 weeks in preferred risks when the occupation is inside and can be accomplished in a sitting position. The same class require from 3 to 5 weeks after severe sprains and the duties are outside, such as traveling salesmen, etc. Ordinary risks are totally disabled from 2 to 4 weeks from slight sprains and from 3 to 6 weeks from severe ones.

PARTIAL DISABILITY in preferred risks whose duties are clerical and do not require much walking, usually lasts from 1 to 2 weeks in addition to the above total. When the occupation in the same class of risks requires much walking, such as insurance solicitors, collectors, etc., partial disability may persist 2 to 4 or 6 weeks. Ordinary risks are not often entitled to partial disability unless the occupation requires considerable time spent in the upright position, when this disability may last from 1 to 3 weeks.

EFFECTS: Individuals having suffered from an uncomplicated sprain of this articulation, are insurable for all kinds of insurance from one to three months after complete recovery.

DISLOCATION OF THE KNEE

INFORMATION: A complete dislocation between the lower end of the femur and the upper end of the tibia is rare, but

a partial dislocation of this joint occurs and is due to direct violence, such as a blow on the leg or thigh above or below the joint or a fall on the knee. These dislocations may be forward, backward, inward or outward, the articular surface of the tibia occupying one of these positions in relation to the articular surface of the lower end of the femur or a rotation of the tibia on to the femur may occur. Dislocations of this articulation produce longer periods of disability than a dislocation occurring to any other joint of the body. This is because the bones of this joint are held in apposition entirely by ligaments which are badly torn and lacerated by a dislocation; the formation of the articular surface of the bones does not assist in keeping them in place as in the case of the hip joint and some of the other articulations.

SIGNS AND SYMPTOMS: Pain of a sickening character occurs after such an injury has been sustained. On examination, the bones are not found in the proper position, being dislocated in the manner as above described. There may be more or less shortening of the leg, and partial flexion or extension, according to the form of dislocation. After the luxation has been reduced, great swelling of the tissues surrounding the joint occurs and is followed by discoloration which is very extensive; tenderness is present and is more marked over the ligaments that have been involved in the injury. Dislocations of this joint frequently injure the blood vessels and nerves of the popliteal space. Pressure on the popliteal artery causes obliteration of the pulse below the point of pressure, while injury to the nerve may cause loss of motion or sensation in the muscles of the leg and foot.

DIFFERENTIAL DIAGNOSIS: *Acute Articular Rheumatism* may be present in this joint and a claimant allege that the disability is due to a dislocation. For information concerning the diagnosis of this disease in conjunction with the knee joint, see Sprains of this joint.

Gonorrheal Rheumatism is sometimes claimed as the result of a dislocation, but the diagnosis is usually made without difficulty and is considered under sprains involving the knee joint.

Tuberculous Disease of this joint in the second or third stage in isolated cases might be claimed as a dislocation. The diagnosis of this disease is described under the preceding article.

COMPLICATIONS: *Fractures of the Patella* or some of the processes in connection with this articulation frequently occur in conjunction with a dislocation and are best diagnosed by the

x-rays, and this means should always be employed in any severe injury occurring to this articulation. It may be possible to diagnose these small fractures immediately after a dislocation has occurred, but swelling ensues so rapidly and becomes so extensive, that ascertaining if such a condition is in existence is extremely difficult by the use of the fingers alone.

TOTAL DISABILITY in preferred risks whose occupation does not require the upright position, lasts from 2 to 4 weeks when the dislocation has been slight and much laceration of the ligaments is not present. In the same class when the duties are outside requiring constant walking or remaining on the feet, total disability lasts from 4 to 6 weeks in injuries of the same degree of severity. Preferred risks suffering from severe dislocations in which great laceration and tearing of the ligaments occurs and is followed by much laceration of the articular surfaces of the joint, require from 6 to 10 weeks of total disability. Ordinary risks suffering from partial dislocations usually demand from 4 to 6 weeks of this disability. When the dislocation has been complete and the ligaments are badly torn and lacerated, total disability of from 8 to 12 weeks is often necessary.

PARTIAL DISABILITY lasts from 1 to 2 or 4 weeks in preferred risks in addition to the above total; this time depending on the exact duties of the occupation. If much walking or movement in this joint is necessary, partial disability may persist for a longer time. Ordinary risks are generally not entitled to any partial disability, as the occupation is not resumed until complete recovery ensues.

EFFECTS: An individual having suffered from a partial or complete dislocation of this joint is an impaired risk for accident insurance until at least two to three years have passed and during which time no signs or symptoms of the injury show themselves. Life or health insurance can be safely written from three to six months after the date of accident, if the injury has been uncomplicated and recovery ensues within a reasonable time.

DISLOCATION OF THE PATELLA

INFORMATION: Dislocations of the patella occur to either side of the knee joint; more frequently the bone is displaced externally, either partially or completely. These displacements are the result of external violence in which a fall is sustained and

the weight of the body falls on the patella or the bone is violently struck by some obstacle; sometimes the cause is muscular action. Reduction of this injury often occurs spontaneously and this is especially the case if there is a history of previous displacements. Rotation of the patella sometimes occurs in a displacement and complicates the injury, causing much trouble in reducing the deformity.

SIGNS AND SYMPTOMS: Following a displacement of this bone, the leg is partly flexed upon the thigh and the patella is found in an abnormal position; a depression, or flat surface occupying the place where it belongs. There is pain, with tenderness over the lateral ligaments opposite to the side on which the displacement occurs; swelling with broadening of the knee supervenes and later is followed by discoloration. If much effusion has existed in the joint, synovitis may develop, when grating between the articular surface is elicited on movement.

FIG. 76.—OUTWARD DISLOCATION OF PATELLA. (Fowler).

COMPLICATIONS: *Fractures* of the patella in which a part of the bone has been chapped off, not infrequently occur in a displacement of this large sesamoid bone and are not often diagnosed unless the x-rays are used.

Synovitis is usual after a partial or complete displacement of the patella and is accompanied by fluid inside the articulation; this causes the patella to be raised up or "float." Pain is worse on movement and at night and motion causes grating which is easily felt; redness of the skin does not occur, but sometimes local heat is present lasting for twenty-four to thirty-six hours.

TOTAL DISABILITY lasts from 2 to 3 weeks in preferred risks whose occupation requires constant standing or considerable walking. In the same class, from 1 to 2 weeks only are required when the duties are at a desk and the upright position is not necessary. Ordinary risks demand from 2 to 4 weeks of this

disability following a complete or partial displacement of the patella.

PARTIAL DISABILITY of 1 to 3 weeks is often payable to preferred risks whose duties are mainly outside, such as bank runners, solicitors, etc. In the same class when the duties are office and supervising, 1 to 2 weeks are usually sufficient. Ordinary risks seldom require any partial disability.

EFFECTS: Displacements of the patella are very prone to recur at the slightest act of over-exertion or accidental injury, and an individual with a history of having suffered from such an accident is not insurable for an accident policy until at least a year or more has elapsed without any signs or symptoms referable to the displacement. Accident insurance companies sometimes accept these risks by placing a waiver on the policy eliminating indemnity for any disability that may be due directly or indirectly to the affected knee. Life or health insurance can be written on such a risk as soon as recovery ensues.

DISLOCATION OF THE SEMI-LUNAR CARTILAGES

INFORMATION: A dislocation of the internal or external semi-lunar cartilage of the knee occurs and is due to indirect force and is most commonly produced when the joint is flexed and a sudden twisting of the foot or leg tears one of these ligaments from its attachments. The internal ligament is the one most often dislocated.

SIGNS AND SYMPTOMS: As the dislocation occurs when the leg is flexed, it immediately produces a locking of the joint which remains in this position. There is sudden, sharp pain with inability to use the leg of the injured side; swelling and sometimes the dislocated cartilages can be felt by the fingers.

TOTAL DISABILITY in preferred risks lasts from 2 to 3 weeks when the duties of the occupation require the upright position. In the same class from 1 to 2 weeks are usually ample when the work is inside and little walking is necessary. Ordinary risks demand from 2 to 4 weeks of this disability.

PARTIAL DISABILITY of from 1 to 2 weeks is payable to preferred risks after such an injury has been sustained. Ordinary risks are not often entitled to this form of disability.

EFFECTS: When a dislocation of either of the cartilages has occurred, a recurrence of the same is frequent; therefore such

an individual is not insurable for an accident policy, unless the policy contains a waiver eliminating indemnity for disability resulting directly or indirectly from the impaired knee or an operation has been performed and the cartilage removed or sutured to its attachments. Life or health insurance can generally be granted from one to two months after the date of accident.

SPRAINS OF THE ANKLE JOINT

INFORMATION: Sprains of the ankle joint occur more frequently than do sprains to any other joint of the body. All degrees of severity are seen in this injury, from a slight sprain which tears a small part of one of the ligaments, to a severe one where several ligaments are badly torn and lacerated. These injuries are usually due to turning of the foot for some reason or other and the weight of the body coming down on the extremity in that position, when a tear of the ligament on the convex surface of the curve occurs. Other causes which produce this injury are twisting of the foot, ever extension and extreme flexion.

SIGNS AND SYMPTOMS: Immediately after the accident occurs, there is pain in the joint which is increased on movement, swelling in a short time becomes extensive and tenderness exists over the ligaments which have been torn. Several hours after a severe sprain of this articulation, the individual is unable to place any weight on the foot of the injured side and discoloration begins to show and becomes very marked in twelve to thirty-six hours.

DIFFERENTIAL DIAGNOSIS: *Fractures* involving the internal or external malleolus sometimes occur in conjunction with a sprain and are best diagnosed by the x-rays. If such a means of diagnosis is not possible, crepitus can sometimes be elicited between the ends of the fractured bone. If the fibula is broken at any part of its course, by making pressure with each hand over the extremities of the bone and having some one press along its shaft, the spring of the bone can be felt if no fracture exists. If the tip of the internal malleolus is broken off, a comparison of the two sides will usually show a difference and a slight depression will be found at the point of fracture.

Tuberculous Disease of this joint usually begins as a chronic synovitis and no history of an injury is present. The foot is held in extension and this is not the position assumed after a sprain. The swelling which surrounds the joint in this disease is globular

in form; whereas a swelling due to a sprain—while it may involve the whole joint—is pronounced on the side in which the greatest tear of the ligament occurs. The skin in this disease is either pale or of a deep reddish hue, while following a sprain, discoloration due to effusion of blood under the skin is present, and this discoloration goes through the different stages, finally disappearing under a greenish-yellow color; marked atrophy of the calf is present in tuberculous disease of this joint and is not seen in a sprain.

Acute Articular Rheumatism may commence in this articulation and the time be coincident with an injury. This disease is accompanied by elevation of the body temperature which is not present in sprains; swelling of the joint which involves all the tissues surrounding it, with heat and redness persisting during the time the articulation is involved, while the swelling in a sprain is usually more marked on the side indicating the most severe tear of the ligament; heat and redness may be present, but do not last longer than twelve to twenty-four hours. Pain is severe in an attack of arthritis and tenderness exists over all parts of the joint, while in a sprain tenderness is more marked over the torn ligaments.

COMPLICATIONS: *Fractures* of the internal malleolus frequently complicate severe sprains of this articulation and are not usually diagnosed unless a skiagraph is made. When the tip of the internal malleolus is torn off, the injury is usually designated —when known—as a sprain or chip-fracture. Fractures of the lower end of the fibula and the internal malleolus of the tibia—known as Pott's fracture—sometimes complicate a severe sprain of the ankle, when the disability is prolonged and the time is governed by the more serious injury.

TOTAL DISABILITY in preferred risks lasts from 2 to 7 days when the ankle has been slightly sprained and the occupation requires a sitting position. In the same class and with a sprain of the same degree of severity, from 1 to 2 weeks are necessary when the duties require much walking. Severe sprains in the same class of risks require from 2 to 3 weeks when the individual works at a desk. If the duties demand the upright position, from 2 to 4 weeks are necessary after severe sprains in preferred risks. Ordinary risks require from 1 to 4 weeks of this disability according to the degree of severity and the exact duties of the occupation.

PARTIAL DISABILITY is payable to preferred risks in ad-

dition to total and from 1 to 4 weeks are usually demanded when the occupation requires considerable walking. In the same class and when the duties are inside and at a desk, this form of disability does not often require more than from 1 to 2 weeks. Ordinary risks seldom ask any partial disability, unless the occupation requires considerable walking, and then from 1 to 2 weeks may be necessary.

EFFECTS: Individuals having suffered from a sprain of this joint are insurable for all kinds of insurance from one to two months after complete recovery; unless there is a history of repeated sprains to the same articulation, when an accident policy should not be issued without a waiver eliminating indemnity for disability due to an accident caused by weakness of this joint. Life or health insurance can be safely written as soon as recovery ensues.

DISLOCATION OF THE ANKLE JOINT.

INFORMATION: Dislocations of the ankle joint or displacements of the superior articular surface of the astragalus from the articular surface of the lower end of the tibia and fibula occur either forward, backward, inward, outward or upward. A dislocation in this situation is almost always complicated with either a Pott's or Dupuytren's fracture. This accident may follow from indirect force, such as a fall from a height and landing on the feet and the foot is either pushed forwards or backwards or by sudden, violent twisting which results in lateral dislocations.

SIGNS AND SYMPTOMS: Deformity is always marked when this injury occurs, and if the dislocation is forward, the foot is lenghtened and the heel almost obliterated. When the dislocation is backward, the foot is shortened and the heel becomes more prominent. Lateral dislocations show the foot twisted and fixed in an unnatural position. There is severe pain, much swelling, followed by discoloration and tenderness over the whole joint.

DIFFERENTIAL DIAGNOSIS: *Acute Articular Rheumatism* involving the ankle joint might be claimed to have started with a dislocation, but as a dislocation almost always requires reduction by a surgeon, a history of this could be obtained and verified. Rheumatism would not commence in the same manner and would usually be preceded by exposure to cold or dampness. As this disease almost invariably affects more than one joint, the

diagnosis can be easily made by waiting until the joint recovers and another one becomes affected. Should an attack of rheumatism commence or follow a dislocation, the affected joint would probably be well of the disease before the disability from the accident would end, and if the individual was covered by a general health policy, indemnity would be payable whether disability was due to an accident or disease. If an accident policy only was carried, insurance companies would usually allow a fair time for the duration of disability that would follow a dislocation, irrespective of the fact that the policy provides "indemnity for disability uncomplicated by disease."

Tuberculous Arthritis of the ankle joint occurring in the early stages may sometimes be mistaken for a dislocation. In this dis-

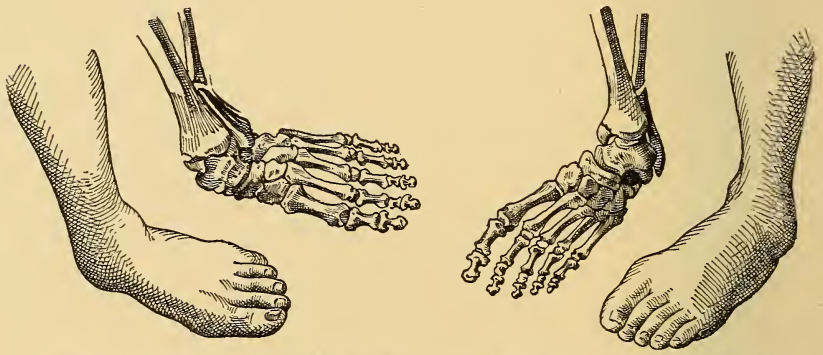


Fig. 77.—Inward and outward dislocation of the ankle-joint, with fracture of tibia and fibula. (Hoffa).

ease, however, the swelling is globular in shape and is confined to the immediate vicinity of the joint; while swelling following a dislocation would extend up the leg and down into the foot and would soon be followed by discoloration characteristic of effusion of blood under the skin. The discoloration present in this disease is of a purplish hue and this persists for weeks and does not end by resolution, but results in caseation and formation of sinuses.

COMPLICATIONS: *Pott's Fracture* almost invariably complicates a dislocation of the ankle, and the length of disability is therefore governed by the time required for union between the ends of the fractured bone.

Dupuytren's Fracture complicates severe outward dislocations of this joint, and disability is prolonged until union is complete between the fractured ends of the bone.

TOTAL DISABILITY in dislocations of this joint which are uncomplicated by fractures and the ligaments are not badly torn, lasts from 1 to 3 weeks in preferred risks whose duties do not require much walking. In the same class and under the same conditions when the duties require much time spent walking or in the upright position, total disability lasts from 2 to 4 weeks. Preferred risks suffering from severe dislocations in which the ligaments are badly torn and lacerated and a probable fracture exists as a complication, require from 3 to 6 weeks of this disability. Ordinary risks suffering from slight dislocations require from 2 to 4 weeks of total disability and from 4 to 8 weeks when the dislocation has been severe.

PARTIAL DISABILITY lasts from 1 to 3 weeks in preferred risks whose duties are mainly clerical, and from 2 to 6 weeks when constant walking or standing is required. Ordinary risks are seldom entitled to any partial disability, they being able to resume all the duties of the occupation when they return to work.

EFFECTS: Individuals having suffered from a dislocation of this joint are not insurable for an accident policy until at least one year has passed after the date of accident, unless a waiver is placed on the policy eliminating indemnity for disability as the result of the weakened ankle. Life or health insurance can be safely written from one to two months after total disability ends.

SPRAINS OF THE FOOT AND TOES

INFORMATION: Sprains of the foot often occur in conjunction with a sprain of the ankle joint. When a sprain involving one of the articulations between the bones of the foot exists, it is generally the result of a fall, the body alighting on the feet and the ligaments which hold the bones forming the arch of the foot together are torn. Sprains of the toes are usually trivial injuries and occur from various causes; the individual most often being barefooted when these injuries are sustained. A sudden twisting of the foot or a weight falling on it may produce sprains of these joints in addition to the contusion of the foot which is also present.

SIGNS AND SYMPTOMS: Pain is always complained of and this is made worse when the weight of the body is put on the injured foot; tenderness on pressure is present in spots and swelling soon appears, to be followed later by discoloration.

COMPLICATIONS: *Fractures or Dislocations* of the tarsal or meta-tarsal bones may complicate a sprain and not be diagnosed unless a radiograph is made. If either of these complications occur, disability is prolonged and the time required for recovery is described under the most severe injury.

TOTAL DISABILITY in preferred risks whose duties are performed at a desk, require from 3 to 7 days after slight sprains of the foot have been sustained. In the same class and the duties are outside, from 1 to 2 weeks are necessary. Preferred risks whose duties require the upright position are totally disabled from 2 to 3 weeks following a severe sprain of the foot. When the occupation requires much walking, total disability lasts from 3 to 4 weeks in the same class and after a sprain involving several joints. Ordinary risks are totally disabled from 1 to 2 weeks for slight sprains and from 2 to 4 weeks for severe ones of the joints of the foot. Sprains involving one or more of the toes in all classes of risks sometimes require from 1 to 5 days of total disability.

PARTIAL DISABILITY is necessary in preferred risks whose occupation does not require much walking and lasts from 1 to 2 weeks. In the same class when the individual is in the upright position during business hours, this disability may last from 2 to 3 weeks. Ordinary risks do not often demand partial disability and when payable from 1 to 2 weeks are usually sufficient. Partial disability is not deserved following sprains of the toes in any class of risks.

EFFECTS: Individuals having suffered from sprains involving the foot or toes, are insurable for all kinds of insurance from two to four months after the date of accident, provided recovery ensues within a reasonable time.

DISLOCATIONS OF THE BONES OF THE FOOT AND TOES

INFORMATION: Dislocations between the tarsal or meta-tarsal bones of the foot or the phalanges of the toes may occur. The most common dislocation involving the bones of the foot is a displacement of the astragalus, and this injury results from a fall when the individual alights on the foot or by sudden, violent twisting. Dislocations involving the meta-tarsal bones themselves and the bones with which they articulate, occur in various

directions. The joints of the toes are sometimes dislocated and these accidents generally happen when the individual is barefooted and unexpectedly strikes the toes against a hard object.

SIGNS AND SYMPTOMS: Deformity of more or less marked degree is present after a dislocation involving any of the joints of the foot or toes. This is followed by pain which is aggravated by resting any weight of the body on the injured foot and swelling and discoloration which sometimes extend up the leg. Tenderness over the bone dislocated is elicited on pressure and the individual is unable to rest any weight on the foot. Dislocations of the joints of the toes produce localized pain, swelling, deformity, discoloration and tenderness.

COMPLICATIONS: *Fractures* often accompany a dislocation of some of the bones of the foot or toes and are usually easily diagnosed. If a fracture involving the tarsal bones is suspicioned and cannot be ascertained by digital examination, the use of the x-rays will serve to make the diagnosis clear.

TOTAL DISABILITY in preferred risks suffering from a dislocation involving the tarsus and meta-tarsus, lasts from 2 to 4 weeks when the occupation requires much walking. The same class suffering from a similar dislocation, require from 2 to 3 weeks when the duties are performed in a sitting position. Ordinary risks require from 3 to 6 weeks when a dislocation of these bones occurs. A dislocation involving the joints of one or more toes produces from 3 to 10 days of total disability in all classes of risks; the length of time depending on the exact duties of the occupation.

PARTIAL DISABILITY lasts from 2 to 6 weeks following a dislocation involving the bones of the foot in preferred risks whose occupation requires constant walking or standing. In the same class, from 1 to 3 weeks are sufficient when the duties are performed in a sitting position. Ordinary risks seldom demand any partial disability. Partial disability of 1 to 2 weeks is sometimes necessary in all classes of risks after severe dislocations involving the joints of the toes; this is especially true if the great toe is the one injured.

EFFECTS: When a dislocation between the joints of the foot occurs, it usually results in more or less stiffening in the articulation involved, but this is not sufficient to prevent an individual from buying any kind of insurance from one to three months after the date of accident.

PART III

FRACTURES AND AMPUTATIONS INVOLVING THE PELVIS AND LOWER EXTREMITY

FRACTURES OF THE PELVIS

INFORMATION: Fractures of the pelvis may occur to one of the bones forming it or to some of the processes connected therewith, and these fractures are usually due to direct violent force, such as follows when the body is run over by a heavy vehicle or caught and crushed in an elevator or railroad accident. These fractures may be compound internally, when some of the tissues or organs of the abdominal cavity are injured or the fractured bones may protrude through the skin, producing the usual form of compound fracture.

SIGNS AND SYMPTOMS: Following an injury of this kind, there is always a history and evidence of violent force applied to this part of the body, and these injuries are usually aggravated by injuries to other parts. Severe pain is complained of over the point of fracture, and this is made worse by pressing the pelvis together, movement of the body, coughing, sneezing or straining at stool. The individual is unable to stand on the feet and when lying down cannot raise the lower extremities. There is swelling and discoloration and crepitus can usually be obtained by bimanual examination with the fingers of one hand in the vagina or rectum.

COMPLICATIONS: *Compound Fractures of the Pelvis* in which the bladder or urethra has been injured are indicated by pain over this region and a constant desire to urinate, hematuria and extravasation of urine into the connective tissue. Such a complication may or may not prolong disability. If only a slight tear occurs and an operation is not necessary for its repair, disability is not prolonged thereby. A severe rupture of the bladder or urethra necessitating an operation increases disability four to six weeks.

Injuries to the Uterus and Vagina may be present when a fracture of the pelvis is sustained by a female. These injuries, how-

ever, are usually entirely recovered before disability necessary for the fractured pelvis is ended.

Rupture of the Rectum complicates fractures of the pelvis and is usually due to a small spicula of bone entering this part of the gut and tearing or lacerating it. These lacerations seldom require an operation for repair, and disability is therefore not prolonged by them.

Septic Peritonitis may develop as the result of an intestinal

Fig. 78.—Typical locations of lines of fracture in fractures of the pelvis. (Eisendrath).

injury, when the fracture is compound internally, and perhaps externally. Such cases are almost invariably fatal within a short time.

TOTAL DISABILITY following fractures of the pelvis depends on the cause of the injury, the location, extent, severity and complications. Uncomplicated fractures involving some of the processes or rim of the pelvis require from 6 to 10 weeks of total disability in all classes of risks. If the fracture involves the innominate bones and is uncomplicated, total disability lasts from

8 to 12 weeks in preferred risks. Ordinary risks require from 10 to 16 weeks of this disability for such an injury. When the fracture is complicated by injury to the viscera, total disability may be prolonged, and if so, the length of time is described under the complication.

PARTIAL DISABILITY of from 3 to 6 weeks is payable to preferred risks following a fracture of this character. Ordinary risks are not often entitled to any partial disability.

EFFECTS: Individuals suffering from uncomplicated fractures of the pelvis that have united without involving any of the viscera in the callus, are not insurable for any kind of insurance until at least one year after the date of accident. If the injury has been complicated, an insurance company would hardly issue any kind of a policy until after a most rigid medical examination, and if the complication has been a rupture of the urethra or bladder, the majority of companies would not consider the risk insurable for any kind of a policy.

FRACTURE OF THE FEMUR

INFORMATION: Fractures of the femur are divided into three divisions, those affecting the upper extremity, the shaft and the lower extremity, and these fractures may be due to direct or indirect force; the location of the injury usually determining the manner in which the violence was received. Intracapsular fractures generally occur in the aged and are especially frequent in women and almost always result from indirect violence, such as a twist of the leg during a fall. Extracapsular fractures of the neck and in rare instances those of the great trochanter are usually due to direct force which is applied over the point of injury; while muscular action is sometimes the cause of fractures of the shaft. Fractures of the lower extremity or between the condyles are most often due to indirect force, such as a fall from a height when the tibia is forcibly driven against the lower extremity of the femur and a split or fracture results.

SIGNS AND SYMPTOMS depend on the location of the injury. Fractures involving the upper extremity when not impacted, show shortening of the leg of one to three inches, eversion of the foot, absolute inability to stand on or move the injured leg, partial flexion of the leg and thigh, an altered arc of rotation of the great trochanter and its ascent above Nélaton's line, to-

gether with pain which is referred to the joint and is increased on movement, extreme tenderness in this locality, swelling and discoloration. Crepitus is sometimes elicited between the fractured ends of the bone, but is not constant. Fractures of the shaft produce shortening of the leg of two to three inches, unnatural mobility at the point of injury, great deformity, the ends of the

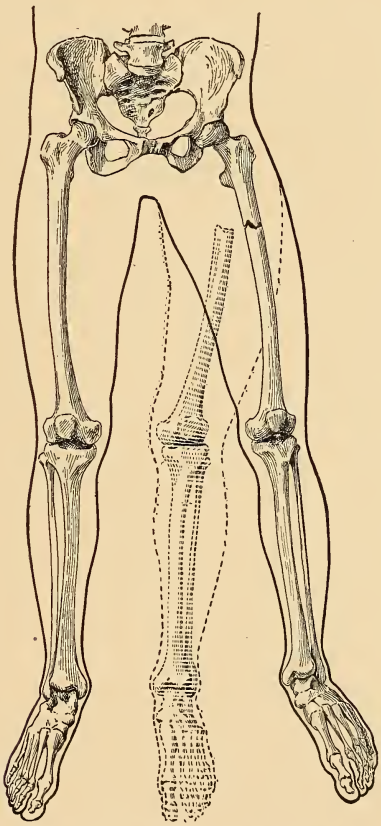


Fig. 79.—Fracture of the left femur upper third. Dotted lines show position the leg may assume after a fracture occurs. (Scudder).

fractured bone being plainly felt in unnatural positions, eversion of the foot, absolute loss of motion and inability to place any weight on the injured leg. There is severe pain at the point of fracture, with crepitation when the fractured ends are rubbed together, great swelling and discoloration. Fractures involving the condyles show some deformity, the knee usually being broadened,

crepitation is present, pain over the fracture and much swelling with discoloration exists. The use of the x-rays is always desirable in fractures involving any part of this bone and should be employed in making the diagnosis and also after reduction has been performed.

DIFFERENTIAL DIAGNOSIS: *Dislocations* of the head of the femur may sometimes be mistaken for intra or extracapsular fractures of this joint and are best diagnosed by use of the x-rays. In dislocations, inversion of the foot is the usual position assumed, the head of the bone by palpation is found in its unnatural position and a depression exists over the place it formerly occupied; there is no crepitus and no false joint as occurs after a fracture, but rigidity where a joint normally exists. Dislocations into the thyroid notch show lengthening of the leg and sometimes eversion of the foot.

COMPLICATIONS: *Dislocations* of the head of the femur sometimes complicate fractures involving the upper extremity and are best diagnosed by use of the x-ray, which should be used in every case when possible.

Fractures involving the lower end of the femur are usually sustained in conjunction with an injury to the knee joint, when an effusion takes place and more or less stiffening results. Injury to this joint, however, does not prolong disability, as the inflammation inside the articulation has usually entirely subsided by the time union between the fractured ends of the bone is complete. If the fracture has produced much injury to the joint, considerable stiffening and loss of motion results, but this may be somewhat reduced by proper and early massage.

TOTAL DISABILITY lasts from 10 to 16 weeks in preferred risks who have suffered from a fracture involving the shaft or lower extremity of the bone and the occupation requires much walking. In the same class and when the fracture exists in a similar location, total disability lasts from 8 to 12 weeks when the duties of the occupation can be performed in a sitting position. Ordinary risks require from 12 to 16 weeks of this disability following a fracture involving any part of this bone. Compound fractures of this bone prolong disability 2 to 4 or 6 weeks. Ununited fractures of the shaft are usually not diagnosed until from 4 to 6 weeks after the accident, when an operation is frequently necessary and total disability in all classes of risks lasts from 6 to 10 weeks after the date of operation. Fractures involving the

upper extremity when occurring in aged individuals, produce total disability of from 3 to 6 months and sometimes longer,—if the accident does not result in death within from 3 to 6 weeks.

PARTIAL DISABILITY of from 1 to 2 months is payable to preferred risks when the occupation does not require the upright position. In the same class, from 1 to 3 months are necessary if the duties are outside, such as collectors, solicitors, etc. Ordinary risks do not often demand partial disability following a fracture of this character, but in some cases it is necessary and from 1 to 2 months are usually required.

EFFECTS: Individuals recovering from a fracture involving the shaft or upper extremity of this bone usually have some shortening of the leg. If the fracture is in the lower extremity, shortening does not often result, but more or less impairment of motion may be present, on account of the knee joint having been involved in the injury. Accident insurance should not be granted to a person who has suffered from this fracture until at least nine to twelve months have elapsed after the date of injury, and not even then unless complete recovery has ensued and no impairment of motion is present. Life or health insurance may be issued to such an individual from six to eight months after the date of accident, provided recovery has progressed satisfactorily.

AMPUTATION OF THE THIGH

INFORMATION: Amputations through any part of the femur as the result of accidental injuries, are not often performed except after severe accidents in which the bone is badly broken and the tissue lacerated. These injuries are usually the result of some heavy body passing over the thighs, such as railroad trains, trolley cars, etc. One or both lower extremities may be amputated through the shaft of the femur or at the hip joint, and in the latter case the injury is generally so severe and shock so pronounced that death almost always follows within a short time. Insurance companies pay a certain figure for accidental injuries resulting in the amputation of one or both legs at or above the ankle joint, provided the operation is performed within ninety days. Some companies pay in addition to this weekly indemnity for the time disability lasts. Should an accidental injury result in an amputation of one or both legs through the femur and death result within ninety days, the company would be liable for the full amount of the policy.

SIGNS AND SYMPTOMS: Evidence is apparent of a badly lacerated leg; in addition there is usually unconsciousness if the individual is seen immediately after the accident, with extensive hemorrhage, pain and severe shock. These injuries are almost invariably accompanied by injuries to other parts of the body; in some cases they may be as severe as the one requiring the amputation, such as a fractured skull and fractures involving other bones.

COMPLICATIONS: *Fractures* to other bones of the body are usually seen in conjunction with these severe injuries, but unless death ensues from some cause, the disability is not often prolonged beyond the time required for recovery following such an amputation.

Pleurisy and Pneumonia following these injuries are sometimes due to a fractured rib, or the result of exposure. If death does not ensue from the severe injury, the complication has generally disappeared before recovery is complete. Should death occur within ninety days from pneumonia which was caused by the end of a fractured rib, it is probable that an insurance company would be held liable for the full amount of an accident policy, but if death followed pneumonia which was due to exposure after such an injury had been sustained, it is questionable if an accident insurance company would pay a death indemnity from such a cause.

TOTAL DISABILITY lasts from 1 to 3 or 7 days when a fatal termination occurs. If the individual recovers, from 12 to 16 weeks are necessary of this disability in all classes of risks following an amputation through the hip joint. If the operation removes the leg through some part of the shaft of the femur, this disability lasts from 8 to 12 weeks in all classes of risks. Infection is usually present in all these cases and is considered in the above time. Accidents requiring an amputation of both legs through the shaft of the bones followed by recovery—which is rarely the case—require from 12 to 16 weeks of total disability.

PARTIAL DISABILITY commences as soon as total disability is ended and persists during the life of the individual, but partial indemnity is never payable, for the reason that the policy provides a specific sum for these amputations and the insurance company has usually paid the claim long before partial disability begins.

EFFECTS: Individuals having suffered the loss of one or both legs are impaired risks and are not insurable for accident

insurance. If only one leg has been lost, insurance companies will generally issue life and health policies two to three years after the date of accident, provided a good stump is the result of the amputation and no evidence of any disease or trouble exists.

FRACTURES OF THE PATELLA

INFORMATION: Fractures of the patella are of frequent occurrence and are more common between the ages of twenty and fifty years. These injuries are usually due to muscular action and sometimes by direct, violent force when a fall is sustained on the knee. When a fracture of this bone is due to muscular action and is caused by a slip, an accident policy would cover the disability, but if the individual was trying to raise a weight with the leg and fractured the patella in this manner, it would be due to a voluntary act and would not be covered by an accident policy.

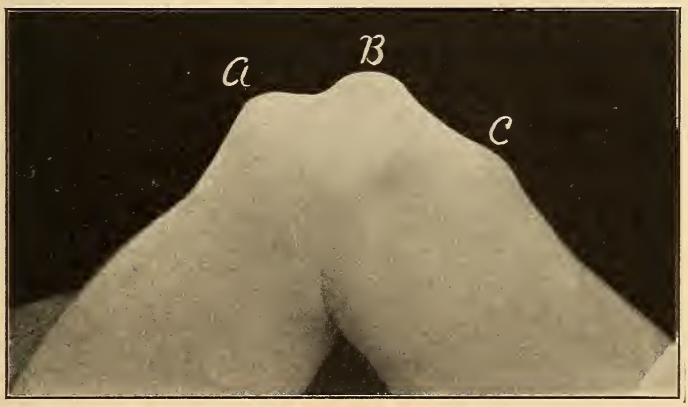


Fig. 80.—Fracture of patella with great separation of fragments. Condyles of the femur are prominent between the fragments. A, The lower fragment; B, the condyles of the femur; C, the upper fragment. (Scudder).

SIGNS AND SYMPTOMS: Immediately after the fracture occurs, there is severe pain, followed by enormous swelling of the joint which is due to effusion of fluid and blood inside the articulation and later discoloration. When the fracture is complete, there is evidence of a part of the bone being drawn upward and another part downward, these two fragments being plainly felt, and between them where the patella normally belongs, a hollow exists and is easily distinguished by palpation. Loss of power of extension of the leg on the injured side is present.

DIFFERENTIAL DIAGNOSIS: *Lateral Displacements of the Patella* might be diagnosed as a fracture of this bone when the swelling is so great that an examination is not satisfactory. As soon as this swelling recedes, however, the patella is found intact at either side of the joint and can then be reduced; while if a fracture exists, it is rare that either of the fragments are displaced laterally, and when they are partly brought together, the quadriceps extensors pull the upper fragment away from its proper position and there is a separation between the two.

COMPLICATIONS: *Synovitis* of the knee joint invariably follows a fracture of this bone and is due to the effusion of blood into the articulation. This inflammation is generally sufficiently recovered by the time the fractured ends of the bones are united together by fibrous union, that disability is not prolonged by the complication.

TOTAL DISABILITY lasts from 3 to 6 weeks in preferred risks when the occupation requires a sitting position and a small oblique fracture exists. In the same class and with the same duties after a transverse fracture of the patella is sustained, this disability lasts from 4 to 6 or 8 weeks. Preferred risks whose duties require the upright position or much walking usually demand from 6 to 10 weeks of total disability following a fracture of any kind involving this bone. Ordinary risks are generally totally disabled from 8 to 12 weeks. A compound fracture of this bone when produced accidentally may prolong disability 2 to 4 or 6 weeks in all classes of risks. If an operation is performed for wiring the fragments together, total disability lasts from 3 to 6 weeks in all classes after the date of operation.

PARTIAL DISABILITY of from 4 to 8 weeks is required by preferred risks whose duties are inside and little walking is necessary. In the same class when the accident occurs among individuals such as collectors, solicitors, store clerks, etc., partial disability lasts from 1 to 3 or 4 months. Ordinary risks do not often ask for partial disability, but this form is sometimes necessary and from 1 to 3 months may be demanded.

EFFECTS: The two fragments of this bone are generally united by fibrous union and in such cases this fibrous tissue invariably stretches, thus producing an impaired risk for accident insurance. If the fragments of the bone have been united by bony tissue or wired together, union is perfect and the individual is insurable for all kinds of insurance from three to six months

after complete recovery, provided sufficient motion for the prevention of accidents exists in the injured joint.

FRACTURES OF THE TIBIA AND FIBULA

INFORMATION: Fractures of these two bones may exist in the upper, middle or lower third and are caused by direct or indirect violence and muscular action. Fractures involving the lower extremity of either bone are usually seen in conjunction with an injury to the ankle joint and are described as Fractures of the Ankle Joint. Fractures of the tibia most commonly involve the shaft and almost always are due to direct force; the fracture

Fig. 81.—Fracture of the tibial shaft. (Scudder).

Fig. 82.—Fracture of tibial shaft. (Scudder).

Fig. 83.—Fracture of tibial shaft. (Scudder).

usually being transverse in the upper part of the shaft of the bone and oblique when the lower section is involved.

SIGNS AND SYMPTOMS depend on the bone fractured. Transverse fractures of the tibia produce no deformity and the individual is often able to walk when the fibula remains intact. In oblique fractures there is slight deformity which is usually easily corrected. Crepitus exists in both forms when the ends of the bone are moved one upon the other; pain is present with swelling and discoloration. Fractures involving the fibula produce little apparent deformity; crepitus can sometimes be elicited, pain is present, swelling and discoloration follow and when pressure is made on the two extremities of the bone and also on its centre, evidence that these two ends are not connected is apparent. Fractures of this bone do not prevent an individual from walking.

Fractures involving the upper end of the fibula or the tuberosities of the tibia, produce little deformity, and if the line of fracture is longitudinal between the tuberosities of the tibia, the individual is unable to put any weight on the injured leg. The x-rays afford the best means of diagnosis for fractures involving the upper extremity of this bone and should always be employed if possible.

COMPLICATIONS: *Dislocation* of the head of the fibula from the articular surface of the tibia is sometimes present in a fracture involving the shaft of this bone and may cause a localized synovitis in this joint, but it must be remembered that this articulation does not communicate with the knee joint and therefore this latter joint is not involved in a dislocation of the tibio-fibula

Fig. 84.—Fracture of the tibia and fibula. (Scudder).

Fig. 85.—Fracture of the tibia and fibula. (Scudder).

articulation and disability is not prolonged when this complication exists.

Longitudinal Fractures between the tuberosities of the tibia result in a synovitis of the knee joint, but unless the injury has been much aggravated after it occurs by the individual trying to walk or persisting in attempting to remain on his feet, disability is not prolonged by the complication, as the inflammation is usually not extensive.

TOTAL DISABILITY lasts from 6 to 8 weeks in preferred risks when the occupation requires considerable walking and the shaft of the tibia has been fractured. In the same class suffering from a similar fracture, when the duties of the occupation are performed at a desk, total disability lasts from 3 to 6 weeks. These individuals in many cases get to their place of business shortly

after the accident occurs by use of a plaster cast and crutches. Ordinary risks require from 8 to 10 weeks of this disability following a fracture involving the upper or middle third of this bone. When the fibula has been fractured, preferred risks whose duties demand the upright position require from 3 to 5 weeks of total disability. In the same class when the occupation is performed in a sitting position, total disability lasts from 1 to 2 weeks only. Ordinary risks demand from 3 to 6 weeks when a fracture of the upper or middle third of the fibula occurs. Fractures in which the tuberosities of the tibia have been separated, require from 6 to 10 weeks of total disability in all classes of risks. Compound fractures involving the tibia or fibula usually prolong disability in all of the above classes from 1 to 4 weeks.

PARTIAL DISABILITY of from 3 to 6 weeks is necessary in preferred risks when the fracture has involved the tibia and the duties of the occupation are performed in the upright position. In the same class when the occupation is inside this form of disability lasts from 6 to 8 weeks following a fracture of this bone. If the fibula has been fractured, from 2 to 4 weeks of partial disability are necessary in preferred risks when the duties require much walking. In the same class and with a fracture of a similar nature, partial disability of from 3 to 6 weeks is necessary in those whose duties are performed at a desk or in a sitting position. Ordinary risks do not often ask for partial disability following a fracture of the fibula.

EFFECTS: Fractures involving these bones with the exception of the lower extremities, usually heal with little or no deformity and the individual is insurable for all kinds of insurance from six to nine months after the date of accident if recovery has been complete and no complications have resulted.

AMPUTATION OF THE LEG

INFORMATION: Amputations of the leg between the knee and ankle are frequently performed as the result of accidental injuries which are caused by some heavy vehicle passing over one or both legs. These injuries are most commonly produced by railroad trains, trolley cars and heavy machinery which so lacerate the soft tissues and destroy the circulation that repair is impossible. If a leg is amputated at or above the ankle joint within ninety days of an accidental injury, an insurance company

is liable for the specified amount as stated in the policy for the loss of one leg. If both legs are lost or one leg and one arm, the company generally pays the face of the policy. Some companies pay weekly indemnity in addition to paying this fixed amount. If a leg is not amputated until ninety days after the date of accident, the company would be liable for weekly indemnity only up to the time total disability ended, when partial disability would commence and this of course could be claimed to the limit of the policy.

SIGNS AND SYMPTOMS: Injuries which result in amputations so seriously damage the parts that the evidence is apparent; in addition there is pain, hemorrhage and severe shock.

TOTAL DISABILITY lasts from 6 to 8 weeks in preferred risks whose duties are performed in a sitting position and the amputation has been done at or near the ankle joint. In the same class when the duties are outside, total disability lasts from 8 to 10 weeks following an amputation at this point. Preferred risks having a leg amputated through the shaft or upper part of the tibia, require from 8 to 10 weeks when the duties of the occupation are inside and no walking is necessary. In the same class, from 8 to 12 weeks are necessary when the amputation is done at this point and the occupation requires the upright position. Ordinary risks require from 8 to 12 weeks of this disability and sometimes longer when the occupation consists of manual labor. Some cases of severe injuries involving the lower extremity are not amputated until considerable time has elapsed after the date of accident, and the above times are for disability commencing with the time the operation is performed. Infection is usual in almost all these cases and is considered in this time. If both legs are amputated at the same time, disability is not prolonged, but if the second one is amputated from 3 to 6 or 8 weeks, after the first, the length of time disability lasts must be computed from the date of the last operation; the individual of course being totally disabled from the time of the accident up to the time the second operation is performed.

PARTIAL DISABILITY is present in all classes suffering from the removal of one or both legs and remains during the life of the individual.

EFFECTS: Individuals having suffered the loss of one or both legs are impaired risks for accident insurance and are not considered insurable by accident insurance companies. If only

one leg has been removed the person is insurable for life or health insurance from six to nine months after the date of accident,—if recovery is complete.

FRACTURE INVOLVING THE ANKLE JOINT

INFORMATION: Fractures occurring in connection with injuries to the ankle joint are described as either a Pott's or Dupuytren's fracture. A Pott's fracture, which is most common, consists of a fracture of the fibula from one to three inches above

Fig. 86.—Anterior view of deformity following Pott's fracture. (Keen).

the lower extremity and a tearing off of the tip of the internal malleolus of the tibia, together with an outward dislocation of the foot. These fractures are usually due to direct force, when the foot turns outward and the strong deltoid ligament on the internal surface of the ankle tears off the tip of the internal malleolus and the fibula is bent inward, causing a fracture in its lower fifth.

SIGNS AND SYMPTOMS: The foot is markedly everted in a Pott's fracture and is badly swollen; this swelling extending a considerable distance above the ankle. There is pain on the slightest movement, tenderness on pressure over the points in-

dicating the fractures, crepitation; loss of spring in the fibula, inability to rest any weight on the foot without great pain and discoloration which is so extensive that the whole foot and leg are involved.

DIFFERENTIAL DIAGNOSIS: *Dislocation* outward of the ankle in which the upper articular surface of the astragalus is displaced outward, invariably accompanies a Pott's fracture, but as the fractured bones require a longer time for recovery than does the dislocation, the complication does not prolong disability. The dislocation is recognized by eversion of the foot, broadening of the ankle joint, impairment of motion and inability to stand on the injured leg. When a dislocation of this joint or fractures of some of the bones in connection with it occurs, the x-rays should be used for the proper diagnosis and also to ascertain if the bones have been properly reduced.

COMPLICATIONS: *Tuberculous Disease* of the ankle joint may be present, and when a fall is sustained, a fracture occurs as a result of the existence of this disease. In such cases, there is a history of pain in the joint, swelling without the typical discoloration due to an injury, limitation of movement, and if the disease has existed long enough to result in a fracture from slight violence, atrophy of the calf muscles is present and sinuses may also have formed around the joint as a result of the caseating process. An accident insurance company would not pay a claim for a fractured ankle if this disease was present and would not insure such an individual if the disease was known to have existed before the policy was taken out or developed after it was issued; the company either declining to issue the policy or cancelling it as soon as such facts become known.

TOTAL DISABILITY lasts from 3 to 4 weeks in preferred risks when the duties can be performed in an office and do not require much walking. In the same class when the duties are outside and require constant use of the legs, total disability lasts from 6 to 8 weeks. Ordinary risks require from 8 to 10 weeks of this disability for this injury. Compound fractures involving the ankle joint cause long periods of disability, increasing the above time from 3 to 6 or 8 weeks and sometimes even longer.

PARTIAL DISABILITY of from 2 to 4 weeks is payable to preferred risks when the duties of the occupation are inside. In the same class when the occupation is performed in the upright

position, this partial disability lasts from 1 to 3 weeks. Ordinary risks do not often ask for partial disability.

EFFECTS: A Pott's fracture of the ankle joint generally produces some impairment of motion in this articulation and this persists for some time. Usually, however, all forms of insurance can be offered such individuals from three to six months after complete recovery.

FRACTURES OF THE TARSUS AND METATARSUS

INFORMATION: Fractures involving the tarsal bones are

FIG. 87.—COMPRESSION FRACTURES OF THE ASTRAGALUS AND OS CALCIS, FOLLOWING A FALL OF EIGHTY FEET. (Keen).
F, Outline of fibula; T, tibia; a, posterior fragment of fractured astragalus. The various letters c represent the comminuted fragments of the fractured os calcis.

not frequent, and when seen are usually the result of direct force, such as a crush of the foot which may be received by a heavy

vehicle passing over it or being caught in machinery. Indirect violence sometimes causes a fracture of the os calcis or astragalus. Fractures of the metatarsal bones are of rather common occurrence and almost invariably are the result of direct force; frequently being compound.

SIGNS AND SYMPTOMS: Fractures involving the tarsal bones cause much swelling of the foot and ankle, followed by discoloration. There is pain, crepitus, unnatural mobility, sometimes an apparent widening of the foot and flattening of the arch, with tenderness on pressure over the fractured bones. If one or more of the metatarsal bones are fractured, deformity usually exists and the fractured ends are diagnosed by palpation; crepitus is present with pain, swelling and discoloration. Inability to stand on the injured foot is complained of in fractures involving the tarsus or metatarsus.

Fig. 88.—Transverse fracture of the fifth metatarsal bone. (Scudder).

TOTAL DISABILITY lasts from 4 to 6 weeks in preferred risks when a fracture of some of the tarsal bones has occurred and the duties are performed without much walking. In the same class, from 6 to 8 weeks are necessary following a fracture of the same bones and the duties of the occupation are outside and considerable walking is required. Ordinary risks are totally disabled from 6 to 8 weeks after a fracture of the tarsal bones. Total disability in preferred risks whose occupation demands a sitting position, lasts from 2 to 3 weeks when a fracture of one or more of the metatarsal bones occur. In the same class and with a similar injury, total disability lasts from 4 to 6 weeks when the occupation requires the upright position constantly or walking is necessary. Ordinary risks demand from 4 to 6 weeks of total disability for fractures involving these bones. Compound fractures of any of the bones of the foot increase total disability in all classes of risks from 1 to 4 weeks.

PARTIAL DISABILITY of from 1 to 3 weeks is payable to preferred risks suffering from a fracture of the tarsal or metatarsal bones and the occupation is outside. In the same class, from 3 to 6 weeks are necessary following a fracture involving any of the bones of the foot and the duties of the occupation are

performed mainly in an office. Ordinary risks are not often entitled to any partial disability when a fracture of any of these bones has occurred.

EFFECTS: A slight impairment of motion generally follows fractures of the tarsal bones, but this is not sufficient to withhold accident insurance and an individual who has suffered from a fracture involving any of the bones of the foot, is insurable for all kinds of insurance from three to six months after the date of accident, provided recovery has been complete.

AMPUTATION OF THE FOOT

INFORMATION: Amputations of the foot are performed after accidental injuries when the foot has been so badly crushed or mashed by machinery, the passing over it of cars, heavy wagons, etc., that recovery is impossible without such an operation. Accident insurance policies do not often pay a specified sum for the loss of a part of the foot, but simply pay the length of time total and partial disability lasts. If the amputation is performed at or above the ankle joint, a fixed sum is payable and this is increased by weekly indemnity during disability by some companies. Some insurance companies allow an "elective" indemnity for the loss of a foot or the fracture of certain bones of the body. This is given in lieu of weekly indemnity.

SIGNS AND SYMPTOMS: Following a crush of the foot, the injury is apparent and there is pain, hemorrhage, swelling, discoloration, loss of motion in the foot and toes involved and inability to rest any weight on the injured member.

COMPLICATIONS: *Septicemia* may develop as the result of a badly lacerated foot or toes and cause disability to be greatly prolonged. This form of blood poisoning may become so severe that death results. If a fatal termination occurs within ninety days after the date of accident, an insurance company would usually be liable for the full amount of an accident policy.

Erysipelas sometimes develops after a foot has been badly torn and lacerated, but this complication seldom prolongs disability.

TOTAL DISABILITY lasts from 3 to 6 weeks in preferred risks whose duties are performed in a sitting position and the amputation of part of the foot is performed after an injury in which the soft parts are not badly lacerated. In the same class and un-

der the same conditions, total disability lasts from 6 to 8 weeks when the occupation requires the upright position and much walking. Ordinary risks are totally disabled from 6 to 10 weeks following an amputation of any part of the foot between the toes and ankle. Infection prolongs the above time in all classes of risks from 1 to 3 weeks.

PARTIAL DISABILITY follows an amputation in which the foot or part of one has been removed, and persists until an artificial foot can be fitted on to the stump and the duties of the occupation performed properly. Such cases usually require the limit of partial disability allowed by the policy, unless an elective indemnity has been accepted in payment of the claim.

EFFECTS: Individuals suffering from an accident in which a part of one or both feet have been amputated, are impaired risks and are not insurable for accident insurance. Life or health insurance can be safely issued to such persons from two to six months after complete recovery.

FRACTURES OF THE PHALANGES OF THE TOES

INFORMATION: Fractures involving any of the small bones of the toes are usually the result of direct force, such as the passing of a heavy vehicle over the toes or a crush due to machinery or a heavy object falling on the foot. These injuries are frequently compound and often result in amputations on account of this complication.

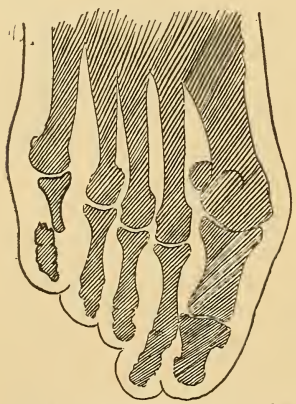


Fig. 89.—Fracture of the first phalanx of the little toe. (Scudder).

SIGNS AND SYMPTOMS: Fractures involving the phalanges of one toe almost invariably produce injuries to the adjacent toes or the foot, when there is swelling and discoloration, pain on movement and crepitation is easily elicited between the fractured ends of the bone. If the injury is a compound fracture, bleeding occurs.

TOTAL DISABILITY lasts from 2 to 7 days in preferred risks when the duties of the occupation do not require much walking Individuals whose occupation demands walking constantly during the day, require from 2 to 3 weeks of this disability. Ordinary risks are totally disabled from 2 to 3 weeks following a fracture involving one or more toes of

the foot. Compound fractures of the phalanges prolong disability in all classes from 1 to 2 weeks.

PARTIAL DISABILITY of from 1 to 3 weeks is payable to preferred risks when the duties are inside and the length of total disability has been very short. In the same class when the occupation requires the upright position and total disability has lasted from 2 to 3 weeks, partial disability is seldom necessary. Ordinary risks are not often entitled to any partial disability.

EFFECTS: Fractures of the bones of the toes heal readily and leave no impairment; the individual being insurable for all kinds of insurance from four to eight weeks after the date of accident.

AMPUTATION OF THE TOES

INFORMATION: Amputation of one or more toes of the foot may result when a compound fracture has occurred or when the toes have been so badly crushed and lacerated by a heavy weight falling on them that repair is impossible. Amputations resulting in the loss of one or more toes are almost invariably accompanied by injuries to some other part of the foot or other toes. Generally the toe which is the most badly mangled is the one amputated and the adjacent ones are saved. Malingerers select the toes of either foot for mutilation more often than any other part of the body and when a toe has been intentionally mutilated or cut off, the injury invariably involves the single toe which is destroyed and the surrounding parts are not harmed, as when the injury occurs accidentally. Such individuals always carry a number of insurance policies, but deny having more than one. They allege the accident occurred,—if possible,—under the doubling clause of the policy and always when no witnesses are present. Examination of the same foot or opposite one frequently shows that the parts of one or more toes have been amputated and no evidence of any previous injury to the foot—except to the amputated one—is apparent.

SIGNS AND SYMPTOMS following an injury to the foot which may result in an amputation of one or more toes, shows an injury most seriously involving the toe which must be amputated, the other toes and part of the foot also being concerned in the accident. The evidence of such an injury is apparent and is accompanied by pain, tenderness on pressure, swelling and discoloration of the adjacent parts.

DIFFERENTIAL DIAGNOSIS: *Self Mutilation* is practiced by some individuals for the purpose of gain, and in these cases the toes are most often selected for amputation. In such instances, as small a part of the toe as possible is taken off. Insurance policies only pay weekly indemnity when the disability is due to the loss of a small part of a toe, but when one whole phalanx is amputated, the policy sometimes provides an elective indemnity; malingerers, therefore, cut off the toe at the terminal joint. These injuries never occur in the presence of witnesses; are usually alleged to have happened in a manner entitling the claimant to double indemnity and no injury to the surrounding toes or foot occurs. Examination of the opposite foot or hands often shows the loss of the terminal phalanx of one or more toes or fingers and the individual is carrying a number of accident insurance policies, although it is claimed only one such policy is in existence. .

TOTAL DISABILITY lasts from 3 to 6 weeks in all classes of risks when one or more toes are amputated and no complication exists. Fractures of the bones of the foot or injuries to other toes may complicate and prolong this disability. Usually, however, the above time is sufficient if an operation is performed within a few days following the accident.

PARTIAL DISABILITY is present in preferred risks when the occupation requires much walking and lasts from 1 to 2 weeks. This time is increased when the great toe has been amputated and may persist from 4 to 8 weeks or longer, or until the individual learns to walk without the use of this member.

EFFECTS: Individuals suffering the loss of any toes from the second to the fifth inclusive, are insurable for all kinds of insurance from one to two months after complete healing of the parts. When the great toe has been amputated, accident insurance would hardly be considered by an insurance company until at least three to six months had elapsed after complete recovery of the injury. Life or health insurance, however, could be safely written from one to two months after complete healing of the stump.

CHAPTER XII

ILLNESSES CAUSING DISABILITY

DISEASES OF THE SKIN

FURUNCULUS

SYNONYMS: Boil; furuncle; furunculosis.

INFORMATION: A furuncle or boil is a localized collection of pus in the skin and shows itself by an area of inflammation and induration, the centre of which is usually a hair follicle or a sebaceous gland. This circumscribed area of inflammation is caused by the staphylococcus pyogenes aureus and is more common in certain diseases, such as diabetes, tuberculosis, indigestion, anemia and Bright's disease and is sometimes the result of injuries to the skin in which the nutrition is impaired and the staphylocci gain access and start an inflammation. Boils are more frequently seen on the face or neck, in the axillæ, around the nipples, anus or labiæ, or on the back, buttocks and perineum.

SIGNS AND SYMPTOMS: A boil commences by a small spot which itches and stings. This gradually enlarges and is accompanied by induration and an area of inflammation that is tender on pressure and in which a throbbing pain is located. In about a week's time, the abscess becomes "ripe" and at the center of the swelling there appears a yellow covering which ruptures and allows a discharge of pus. Several days later, the core or necrosed central part of the boil is discharged through this opening and healing commences. This is accomplished by the cavity filling up with granulation tissue and being covered over by a scar or cicatrix which becomes white and usually persists. Furuncles which do not suppurate are known as "blind" boils. Constitutional symptoms are slight when only one boil exists, but if a number of them are present, grave signs and symptoms may result and imperil the life of the individual.

DIFFERENTIAL DIAGNOSIS: *Carbuncles* are often mistaken for boils in the early stages, but these are usually situated

where the connective tissue is thick and dense, such as the back of the neck, the back or buttocks and occupy a large area which is highly inflamed, tender on pressure and very painful. Carbuncles occur singly and have a number of foci of infection and discharge pus from several points; no core is present, but the whole part becomes necrosed tissue and requires removal.

COMPLICATIONS: *Boils* often indicate the existence of a constitutional disease, and if seen in an individual who is carrying a health policy, the urine should always be examined to ascertain if diabetes or Bright's disease is present.

HOUSE CONFINEMENT is not necessary when one or more small boils exist, but if several large ones are present at the same time or they appear in crops, house confinement may last from 1 to 2 or 4 weeks; this time depending on the size and severity of the furuncle and often on the co-existing constitutional disease which may be present.

TOTAL DISABILITY of 1 week is usually sufficient in all classes of risks suffering from one or more boils. If a number of these are present or occur in crops, and house confinement lasts from one to two weeks, total disability of from 1 to 3 weeks is necessary.

PARTIAL INDEMNITY FOR TOTAL DISABILITY is sometimes payable after an individual has suffered from a number of boils which have occurred either singly or in crops, and 1 to 3 weeks may be demanded for the time spent in recuperation before return to work is possible. Some health policies only pay for house confinement and therefore in such cases this form of indemnity would not be payable. Other policies only pay a fractional part of the total disability for time spent in recuperation, and this point must be borne in mind in settling such cases.

EFFECTS: Individuals with a history of having suffered from a number of boils are not insurable for any kind of a policy until after an examination of the urine has been made and it has been found normal. If a few boils only have occurred during the life time, insurance of all kinds can usually be issued two to four weeks after the date of the last one.

CARBUNCULUS

SYNONYMS: Carbuncle; anthrax.

INFORMATION: A carbuncle is a circumscribed inflam-

mation of the skin and deeper tissues and is said to be caused in some cases by deep bruises; the injury lowering the vitality of the tissues and the micro-organism which causes this inflammation gains access through the blood current and produces suppuration. Carbuncles are most often seen on the neck, back or buttocks, and are more common in men than in women. They frequently occur in individuals suffering from diabetes and those whose general health is below par.

SIGNS AND SYMPTOMS: A carbuncle is often described as a collection of boils in a small space and commences by a nodular swelling which has scattered over its surface small vesicles. This swelling soon enlarges, becomes dusky in color and is the seat of severe pain and tenderness on pressure. After seven to ten days, a number of points of infection appear and break down, discharging small quantities of pus, and when the carbuncle involves a large area, these foci of infection coalesce and form one large œdematous mass of necrosed tissue. Constitutional symptoms are always present in this disease, the severity of which depends on the area and depth of the carbuncle. There is malaise, loss of appetite, coated tongue, fever, and in some cases septicemia follows:

DIFFERENTIAL DIAGNOSIS: *A Furuncle* is often diagnosed as a carbuncle in the early stages, but after a few days the constitutional symptoms, together with the increasing area of inflammation surrounding it and the appearance of several points of infection, tend to show that the inflammation is more than a boil and a carbuncle is developing.

COMPLICATIONS: *Septicemia* may complicate any carbuncle and result in symptoms characteristic of this infection. If this exists, death frequently occurs and disability is shortened thereby.

HOUSE CONFINEMENT lasts from 1 to 3 weeks when the carbuncle occupies a small area and systemic symptoms are not marked. Those of a larger size require confinement to bed and the house from 3 to 6 weeks. This time is increased 2 to 4 weeks when the disease occupies a very extensive area and several operations for the removal of the sloughs are necessary.

TOTAL DISABILITY of from 2 to 4 weeks is payable to preferred risks suffering from small carbuncles. When the disease has been extensive, the time required for this disability is from 1 to 3 weeks longer than house confinement. Ordinary risks

are usually totally disabled from 1 to 2 weeks longer than preferred risks.

PARTIAL INDEMNITY FOR TOTAL DISABILITY if payable in addition to house confinement and total disability, usually requires from 2 to 4 weeks; this time depending on the occupation of the individual, the location and extent of the carbuncle, the age and physical condition.

EFFECTS: Individuals having suffered from a carbuncle in which there is no history of any previous ones existing and examination of the urine shows it to be normal, are insurable for all kinds of insurance from one to four months after complete recovery and healing of the parts. Accident and life insurance can usually be written at the same time on such individuals, even though there is a history of more than one carbuncle, provided the excretion from the kidneys is normal.

ECZEMA

SYNONYMS: Tetter; scall; salt rheum.

INFORMATION: Eczema is a non-contagious, catarrhal, inflammatory disease of the skin which attacks individuals and may be acute or chronic. Eczema rarely causes total disability, unless involving a large area of skin or it is found around the genitals. Acute cases of this disease are seldom severe enough to cause house confinement or loss of time from business, and individuals having once suffered from this disease would not be insurable if a history of such was given on the application. Therefore, claims arising as the result of eczema are not often covered by an insurance policy, for the reason that the disease almost invariably existed before the application was taken out and if no mention of it was made at the time the policy was applied for, a breach of warranty exists and insurance companies are not liable for such claims.

SIGNS AND SYMPTOMS vary according to the location and variety of the disease. There is usually some swelling, with heat and formation of blisters which rupture and are covered by a yellowish crust. The skin is a mottled, reddish hue, harsh, dry and thickened with areas that are constantly wet from oozing. Burning and itching of the parts involved are the most constant and annoying symptoms of this disease.

DIFFERENTIAL DIAGNOSIS: *Herpes Zoster* resembles

this disease, but herpes are usually found situated over the course of a nerve, and these blisters are accompanied by intense neuralgic pain which is absent in eczema The duration of herpes is a few days only, while eczema lasts an indefinite time.

Erysipelas in the early stages might be confounded with eczema, especially when there is an existing history of this latter disease. Erysipelas, however, is accompanied by high fever, intense inflammation and redness of a circumscribed area; the circumference of which is well marked and is readily felt by the fingers.

HOUSE CONFINEMENT lasts from 1 to 2 weeks in all

Fig. 90.—Eczema of leg with varicose ulcers. (Stelwagon).

classes of risks suffering from this disease involving the genitals and internal surfaces of one or both thighs.

TOTAL DISABILITY lasts from 1 to 3 weeks in all risks who are disabled by this disease, and this time is payable if the disease has not occurred previously. If it has been present and the company is not in possession of these facts, it is questionable if an individual would be covered for the time disability existed.

PARTIAL INDEMNITY FOR TOTAL DISABILITY is rarely payable to any class of risks following an attack of this disease, either in the acute or chronic form.

EFFECTS: Individuals subject to eczema almost invariably suffer attacks of this disease from time to time, but as this has no

effect on the longevity or production of accidents, life or accident insurance could be safely issued to such persons as soon as recovery ensues. Health policies, however, would not be written unless a waiver eliminating disability for this disease was attached.

FELON

SYNONYMS: Whitlow; paronychia; ring-around; bone felon.

INFORMATION: A felon is an inflammation involving the skin surrounding the base of the nail or is deeper seated and the bone and periosteum are affected. Felons are said to follow injuries of some character, when pus-organisms gain access to the tissues and result in a superficial or deep felon. This affection in-

Fig. 91.—Deep felon, with sloughing of soft parts and necrosis of bone. (Da Costa).

volves the toes and fingers and is more common in the latter; usually affecting the last digit of a finger or thumb.

SIGNS AND SYMPTOMS: Superficial felons are generally found around the base of a nail, when there is a semi-circular swelling in this situation accompanied by a purplish-red discoloration of the skin, with pain and tenderness on pressure. This condition continues until the pus is evacuated by an opening between the nail and skin or through an incision. A bone felon commences by swelling of the finger which gradually increases and is accompanied by pain of an intense, throbbing character

which is worse at night and when the hand is in the dependent position. The finger is extremely tender and a reddish discoloration with heat is present. These signs and symptoms are not abated until a deep incision is made and the pus discharged. Systemic symptoms, such as loss of appetite, inability to sleep and fever are present in cases suffering from bone felons.

COMPLICATIONS: *Necrosis* of the terminal phalanx of the affected finger or thumb sometimes occurs with this affection, and removal of this part of the bone is necessary, thus prolonging disability and resulting in a permanently deformed finger.

Tenosynovitis almost invariably complicates a bone felon, but is usually confined to the digit affected. This inflammation, however,—when the thumb or little finger is involved,—may extend into the palm of the hand and result in a palmer abscess, when disability will be greatly prolonged.

HOUSE CONFINEMENT does not exist in superficial felons. Bone felons are sometimes so severe that the individual remains part of the time in bed, and in such cases house confinement lasts from 5 to 10 days in all classes of risks.

TOTAL DISABILITY is not payable to any claimant suffering from a whitlow or superficial felon. Preferred risks are sometimes totally disabled from 1 to 2 weeks when a severe bone felon has existed and involved the fingers or thumb of either hand. Ordinary risks generally require from 1 to 3 weeks of this disability, the length of time depending on the exact duties of the occupation, severity of the infection and treatment. Bone felons resulting in necrosis of the terminal phalanx and causing an amputation of this part, prolong disability from 2 to 3 weeks in preferred risks when the felon involves the right hand and the duties require the constant use of this extremity. If a felon involves the left hand and amputation of the end of the finger or thumb is necessary, total disability seldom lasts longer than from 1 to 2 weeks. Total disability is greatly prolonged when a palmer abscess results and involves the right hand, and this is described under Palmer Abscess.

PARTIAL DISABILITY of from 1 to 3 weeks is sometimes payable to preferred risks suffering from a whitlow or ring-around when the claimant carries an accident policy and the infection follows an accidental injury.

PARTIAL INDEMNITY FOR TOTAL DISABILITY: If a claimant must be confined to the house to be entitled to total

disability, partial indemnity for total disability—if provided by the policy—is sometimes payable after this period of house confinement, and may require from 1 to 2 weeks when the individual has suffered from a severe bone felon. Superficial felons do not produce sufficient disability to entitle a person to any partial indemnity for total disability, for the reason that this form of indemnity is only payable after a period of total disability, and this is never caused by this form of felon.

EFFECTS: None, if the claimant has fully recovered and has not lost the use of the finger or any part of it. If the end of the finger is taken off for any reason, some impairment exists, but is not sufficient to prevent insurance of all kinds being issued.

HERPES ZOSTER

SYNONYMS: Shingles; a girdle; intercostal neuralgia; zona.

INFORMATION: Herpes zoster is the external manifesta-

Fig. 92.—Herpes zoster involving chest, side and back. (Church and Peterson).

tion of an inflammation of some of the nerves of the body. It usually occurs over the intercostal nerves, most often involving the third, fourth and fifth, and is unilateral; sometimes it affects one whole side, from the middle line of the body in front to the

middle line behind. It consists of a line of pearly blisters following the course of the inflamed nerve or nerves and is supposed to be caused by exposure to cold or dampness, prolonged use of arsenic, injuries, and by some diseases, such as anemia and malaria.

SIGNS AND SYMPTOMS: This affection begins by neuralgic pain over the nerve affected, accompanied by a very slight elevation of temperature, and this is soon followed by the formation of discrete vesicles that are first filled with a clear, watery fluid which soon becomes a yellowish tinge. These vesicles appear in groups and are usually the size of a pin's head; after persisting several days, rupture of the vesicles takes place and they coalesce, forming irregular patches that are covered by yellowish scales. The neuralgic pain which precedes the rupture persists and may even last after the vesicles have entirely disappeared. This affection is self limited, disappearing in one to two weeks.

HOUSE CONFINEMENT is not necessary and is not present in mild cases of this disease, but severe ones require from 1 to 2 weeks inside the house, and frequently this time must be spent in bed.

TOTAL DISABILITY should not be paid to any class of risks suffering from a mild case of herpes, but when the disease has been severe enough to cause house confinement for some days, total disability of from 1 to 2 weeks is necessary.

PARTIAL INDEMNITY FOR TOTAL DISABILITY if payable by the policy after the termination of house confinement should seldom be paid to any class, as the disease is either so mild that total disability does not occur or is sufficiently severe to cause absolute confinement to the house, when total disability is present.

EFFECTS: Individuals having suffered from herpes involving any part of the body are insurable for any kind of a policy from one to two months after complete recovery, provided there is no history of previous attacks of this disease. If such a condition has existed, an insurance company would not accept a risk with this history for health insurance unless a waiver was placed on the policy eliminating the payment of indemnity for this affection.

VARICOSE ULCER

SYNONYMS: Chronic ulcer; eczematous ulcer; hemorrhagic ulcer.

INFORMATION: An ulcer forming on any part of the body, and especially on the lower extremities between the knee and ankle, when in conjunction with an eczematous condition of the skin or varicose veins, is known under one of the above names. These ulcers usually occur in persons past middle age and result from the slightest scratch or blow to the part of the body af-

Fig. 93.—Varicose ulcer of leg. (Eisendrath).

fected with eczema or a number of dilated veins, and in almost every case there is a history of previous ulcers. An insurance company would not accept an individual for accident or health insurance with a history of having suffered from a varicose ulcer of the leg or having a condition that would result in such an ulcer when an injury was sustained. Therefore, claims for indemnity

alleging the cause as due to an ulcer of the leg are almost invariably claims for disability resulting from chronic or varicose ulcers, and unless mention has been made in the application of such a condition existing, there is a breach of warranty, and an insurance company is not liable for indemnity under such conditions.

SIGNS AND SYMPTOMS: Eczematous ulcers are most common in men after fifty years of age and more frequently affect that part of the leg within six to eight inches above the ankle. These ulcers form when there is an eczematous condition of the skin or the superficial veins are dilated. In such cases there is a reddish discoloration and engorgement of the skin which breaks down and bleeds from a slight scratch or blow. This small abrasion results within a few days to a week in an ulcer varying in size from a half to one or two inches in diameter with a red, bleeding base, thick, swollen, sloping edges, and later is covered by exuberant granulations and discharges pus which irritates the surrounding tissue. This condition persists and responds exceedingly slow to all kinds of treatment.

DIFFERENTIAL DIAGNOSIS: *Syphilitic Ulcers* situated on the lower extremities are the only form of ulcers which may be mistaken for an ulcer due to a local condition. These ulcers are preceded by a history of specific infection and the signs and symptoms which follow that infection. Syphilitic ulcers occur in the second or third stages of this disease and are usually circular or crescentic in shape with a punched-out appearance, the edges undermined and the circumference surrounded by an area of inflammation, while the base of the ulcer is generally covered with a slough. When such an ulcer heals, it does so under systemic treatment and usually leaves a depressed, white scar. An insurance company would not be liable for indemnity under an accident policy if disability resulted from this form of an ulcer and when a general disability policy is carried, it usually exempts disability from venereal diseases.

HOUSE CONFINEMENT is extremely uncertain in cases of varicose ulcers. When the sore is small and the surrounding tissue is fairly good, house confinement does not exist at all, but when the ulcer is one to two or three inches in diameter and much dilatation of the veins exists with perhaps an eczematous condition of the skin, house confinement lasts from 2 to 4 or 6 weeks and oftentimes much longer; this depending greatly on the condition of the skin of the leg on which the ulcer is found; the phy-

sical condition of the individual, the opportunity for treatment and the treatment itself.

TOTAL DISABILITY, if payable to a claimant who secured a policy when the conditions were normal, lasts according to the size of the ulcer and the period of house confinement which follows. Small ulcers which occur for the first time on a leg in such a condition, should not cause total disability of more than 1 to 2 weeks. Large ulcers which result from an abrasion or contusion to the leg and break down rapidly, cause total disability of from 3 to 6 or 8 weeks and sometimes longer.

PARTIAL INDEMNITY FOR TOTAL DISABILITY, if payable by the policy after the termination of house confinement may also be uncertain; depending on the condition of the leg and the ulcer at the termination of this period; usually, however, from 1 to 2 or 3 weeks are sufficient.

EFFECTS: Individuals with an impaired condition of the skin of the lower extremities or with a history of having had one or more ulcers in this situation, are not insurable for an accident or health policy, even though a waiver be placed on the policy eliminating indemnity for this disability, for the reason that such individuals are addicted to excesses of various kinds and generally come from the lower walks of life where the sanitary surroundings are poor and a constant struggle for existence is necessary. Life insurance also would hardly be issued to such persons.

CHAPTER XIII

DISEASES OF THE BRAIN AND NERVOUS SYSTEM

APOPLEXY

SYNONYMS: Cerebral hemorrhage; cerebral apoplexy; a stroke.

INFORMATION: Cerebral hemorrhage results from the rupture of a blood vessel in some part of the brain and the resulting pressure on account of free blood on the brain substance causes unconsciousness and paralysis. It usually occurs after forty years of age, but is not uncommon before that time and is due to disease of the walls of the arteries. Apoplexy is most frequent in chronic alcoholics, those suffering from Bright's disease, syphilis, rheumatism and gout and is more often seen in the spring and fall. The attack is usually caused by excesses of some kind, such as over-indulgence of alcohol or food, mental or physical excitement, lifting, straining and in rare instances by traumatism, either at the time of the accident or several days later, but in these cases arterial degeneration has been existing for some time.

SIGNS AND SYMPTOMS: Attacks of apoplexy are generally preceded by prodromes of headache, vertigo, tinnitus aurium, disturbed sleep and rarely a sense of numbness and weakness on the side about to be affected The attack itself is sudden in onset, producing early unconsciousness or at once, thus causing the individual to fall. The face is flushed, respiration is noisy, slow and irregular, with a puffing outward of the paralyzed cheek; the pulse is full and slow; relaxation of the muscles is present with paralysis of the parts affected. The pupils do not react to light and the temperature is subnormal in the beginning, but within twenty-four to thirty-six hours, rises two to three degrees. Cases which quickly terminate fatally, have high temperature within a short time after the hemorrhage occurs.

DIFFERENTIAL DIAGNOSIS. *Syncope or Fainting* is due to a failure of the circulation which produces unconsciousness, but in such cases the face is pale and ghastly white, in contradistinction to the flushed face in an apoplectic seizure. The pulse is

feeble in fainting, while in apoplexy it is slow and full. Respirations are quiet and unconsciousness persists for a short time only in syncope.

Alcoholic Coma produces unconsciousness which is not so complete as apoplexy; the pulse is frequent, pupils react to light and ammonia held under the nose produces discomfort. "Firm pressure on the supraorbital notches with a steadily increasing force, will terminate unconsciousness when due to alcohol in almost all cases." (Dr. Von Wedekind's test.)

Opium when taken in poisonous doses causes a gradual increasing unconsciousness with contracted, pin point pupils which

Fig. 94.—Hemorrhage into the internal capsule and the caudate and lenticular nucleus of the right cerebral hemisphere (from Bollinger).

do not react to light, shallow respirations and slow pulse In coma from this drug the individual can be aroused, but immediately lapses into unconsciousness again.

Uremic Coma may be mistaken for coma due to cerebral apoplexy, but if a history is obtainable it will be learned that convulsions have preceded the period of unconsciousness and the individual has suffered from Bright's disease for some time The pupils are not drawn to the affected side as in apoplexy and the temperature in uremic coma rises rapidly, reaching 104° F or over, and this is not seen in apoplexy unless a fatal termination rapidly occurs. If a specimen of urine can be obtained, it will be found almost solid with albumin.

Sun Stroke produces coma, but in many such cases a history of exposure to heat can be elicited before the individual becomes unconscious. After this period is reached, the face is flushed and the surface of the skin hot and burning; the pulse is quick and the breathing either shallow or labored. Temperature rapidly rises, reaching 105° to 108° F and even going as high as 110° F, when death usually terminates the case.

COMPLICATIONS are generally described under sequelæ. Paralysis involving different parts of the body is the most important sequelæ and is present to a more or less degree in all cases, manifesting itself by the peculiar signs and symptoms of the part involved.

HOUSE CONFINEMENT lasts from 5 to 14 days in mild cases of apoplexy. When the hemorrhage has been severe and a period of unconsciousness persists for a few hours to several days, house confinement lasts from 2 to 4 weeks.

TOTAL DISABILITY is present and persists from 1 to 3 or 6 weeks; this time depending on the severity of the attack, extent of paralysis and the rapidity with which recovery follows, the occupation and financial condition of the insured.

PARTIAL INDEMNITY FOR TOTAL DISABILITY of from 2 to 4 weeks is payable, when the policy provides this form of indemnity for convalescence following a period of total disability after the ending of house confinement.

EFFECTS: Individuals having once suffered from an attack of apoplexy are not insurable for any kind of a policy, and if an accident or health policy is carried by such a person, good underwriting demands that it be cancelled at once, as the cause which produced the cerebral hemorrhage remains and another one may take place at any moment.

EPILEPSY

SYNONYMS: Fits; convulsions; idiopathic epilepsy; falling sickness; grand mal.

INFORMATION: Epilepsy is a chronic disease which usually originates in early life and persists for years, sometimes, however, yielding to treatment and almost disappearing, but most frequently becoming worse as age advances. Epileptics generally suffer from chronic indigestion and are prone to contract diseases of the kidneys or lungs. Accidents due to attacks of epilepsy in which the individual falls unconscious and injures

himself in the fall or is hurt by other means, are not covered by an accident policy. Should the party be in possession of a general disability policy, it is a foregone conclusion that such a policy has been obtained by withholding a history of epilepsy, as no insurance company would issue such a policy to any one who had ever suffered from this disease, consequently, if a claim should arise under a general disability policy, an insurance company could decline to pay it and would have sufficient grounds for defending its action.

SIGNS AND SYMPTOMS: An attack of grand mal comes on suddenly and is usually preceded by a more or less pronounced aura and in such cases, epileptics are sometimes able to prevent a seizure. As an attack develops, the individual falls unconscious with a peculiar cry, the face is blanched, froth exudes from the mouth and biting of the tongue occurs unless something is placed between the teeth to prevent such an accident. Clonic convulsions of the muscles are seen and coma lasting from a few minutes to several hours ensues, when the individual awakens with a confused idea as to the surroundings, but generally with an improved mental condition. When epilepsy follows an injury, an attack may first occur within thirty to ninety days after the blow to the head is received, but usually not until at least one year has elapsed and these attacks differ from those seen in epilepsy existing from childhood.

DIFFERENTIAL DIAGNOSIS is not difficult in these cases, as attacks in all individuals are practically the same and when once seen the diagnosis is easy. Uremic convulsions might be mistaken for epilepsy, but the history and a urinary analysis would soon make the diagnosis clear.

COMPLICATIONS: *Accidents* involving some part of the body occur very frequently in epileptics and these injuries may be slight or severe; depending upon the position in which the individual is placed when the attack takes place. Disability from these accidents, however, is not covered by an accident or disability policy.

HOUSE CONFINEMENT does not exist in this disease, except in cases of very severe epilepsy which usually occurs in young folks and the individual is placed in a hospital and confined for the purpose of watching the disease and to prevent external injury during a seizure.

TOTAL DISABILITY: None. Attacks of this disease sel-

dom last over three to four hours, when the individual awakens much relieved and with the mental condition improved.

PARTIAL INDEMNITY FOR TOTAL DISABILITY: None.

EFFECTS: Epileptics are not insurable for any kind of a policy and if found insured, the policy should be cancelled at once. Insurance companies assume risks on such persons for all kinds of insurance when a history of epilepsy existed and no convulsion has occurred for ten to fifteen years. In such cases, the person is considered an average risk; all other conditions being normal.

LOCOMOTOR ATAXIA

SYNONYMS: Posterior spinal sclerosis; tabes dorsalis.

INFORMATION: Locomotor ataxia is a chronic disease of the nervous system, especially affecting the posterior columns of the spinal cord and the posterior nerve-roots. It occurs more frequently between the ages of twenty and fifty years, is much more common in men than in women and syphilis is said to be the cause of the greater percentage of cases, although sexual excesses and alcoholism, with exposure, are contributing factors.

SIGNS AND SYMPTOMS depend on the stage of the disease. When it first shows itself, there is a loss of sensation in the feet and lower limbs, associated with sharp, lancinating pains which appear in paroxysms. These are soon followed by loss of power of co-ordination in the fingers and feet and is first noticed when the individual is unable to touch the face with the fingers and the eyes are closed, and "Romberg's" symptom which is inability of the individual to remain in the erect position with the eyes closed and heels together. A characteristic gait is always seen—that of throwing the feet forward and bringing them down forcibly. A sense of constriction around the abdomen, known as the "girdle sensation," is present, and is accompanied by severe pain. The Argyll-Robertson pupil which fails to react to light, but which accommodates itself for distance is present in all these cases. The knee jerk is absent early in the disease and later other reflexes may become abolished. The disease may become progressive for some time, until it finally causes death or it may be stopped and remain quiescent for a number of years.

DIFFERENTIAL DIAGNOSIS: *Cerebellum disease* in the early stages might be confounded with ataxia, but in the former there is headache, vertigo, nausea, vomiting and optic neuritis;

while the reflexes are present and neuralgic pains and eye symptoms are absent.

Chronic Myelitis begins gradually with burning, tingling and numbness in the lower extremities and is of slow duration. The reflexes are generally exaggerated in this disease and no wasting of the muscles occurs, but the sphincters are affected early.

Multiple Neuritis is characterized by tenderness over the peripheral nerves; absence of lancinating pains, the Argyll-Robertson pupil, Romberg's symptom and the patellar reflex.

HOUSE CONFINEMENT: This disease is of such slow onset that house confinement never exists in the early stages, and when present, is evidence that the disease has been existing for months or years. Therefore, if an individual is carrying a general disability policy and unless it was issued a considerable time before house confinement is claimed, the claimant would hardly have a valid claim against an insurance company.

TOTAL DISABILITY almost never exists until the last stage of this disease, when the individual suffers from extensive loss of co-ordination of different muscles of the body and paralysis. In rare cases, total disability lasts from 1 to 3 or 5 years, at the end of which time an improvement seems to occur and the individual is able to resume light duties.

PARTIAL INDEMNITY FOR TOTAL DISABILITY should never be paid by an insurance company, for the reason that partial disability precedes a period of total and may last from 1 to 5 or 10 years. The intent of an insurance policy is to provide indemnity for total disability during convalescence, and following a period of total disability which causes house confinement, and this condition is never present in this disease.

EFFECTS: An individual is never insurable for any kind of insurance with a history of having once suffered from locomotor ataxia.

PROGRESSIVE MUSCULAR ATROPHY

SYNONYMS: Chronic poliomyelitis; wasting palsy; chronic spinal muscular atrophy; amyotropic lateral sclerosis.

INFORMATION: This disease is a chronic affection in which the ganglion-cells in the anterior horns of the spinal cord degenerate and produce a progressive motor paralysis and atrophy of certain groups of muscles. It is more common between the ages of twenty and fifty years and is said to be due to ex-

posure to cold, over-exertion, lead poisoning, syphilis and rarely to injuries of the brain and spinal column.

SIGNS AND SYMPTOMS: The onset of progressive muscular atrophy is so gradual that the diagnosis is not often made until it has existed for several months or more, when small fibrillary contractions of the muscles affected occur on the slightest excitement. This is accompanied by pallor of the skin, loss of sensation, numbness and wasting of the muscles involved. As the disease progresses, the wasting becomes so pronounced that the body seems to be composed only of skin and bone.

DIFFERENTIAL DIAGNOSIS: *Idiopathic Muscular Atrophy* is a hereditary disease which occurs in children and affects the larger muscles of the body and in which fibrillary tremors are lacking.

Syringomyelia in the early stages might be confounded with progressive muscular atrophy, but when it is remembered that this disease is nearly always bilateral and is accompanied with a loss of sensation to heat and cold and trophic changes in the skin, an error is not often possible.

HOUSE CONFINEMENT: The onset of this disease is so gradual that it does not produce house confinement until after it has existed for months or years, at which time the final stage is reached and an insurance company would not have a policy on the individual unless it has been issued years before and no claim had ever been made for any disability, thus preventing the company from knowing that such a disease existed.

TOTAL DISABILITY only occurs in the last stages of progressive muscular atrophy and the duration of this is very uncertain, sometimes lasting a few months only and again for several years; this being due to the fact that the disease is occasionally arrested during its course and remains stationary for some years.

PARTIAL INDEMNITY FOR TOTAL DISABILITY: An individual afflicted with this form of muscular atrophy in which the disease has been arrested, is not often capable of doing any work and as this condition would not occur until after a long period of total disability, an insurance company would not be carrying a policy on such a person.

EFFECTS: Individuals having suffered from this disease are not insurable for any kind of a policy.

SPINAL HYPEREMIA

SYNONYMS: Spinal congestion; plethora spinalis.

INFORMATION: Congestion of the spinal cord is a condition which is caused by exposure to cold and dampness, alcoholic excesses, poisons, such as strychnina, picrotoxin, and sometimes is claimed to be due to injuries of the back.

SIGNS AND SYMPTOMS: Acute spinal congestion begins with tingling sensations in the lower limbs and feet, increased reflexes with dull pain in the dorsal and lumbar regions, which often extends into the hip and thighs. This dull pain is said to be increased by the application of heat, but is unaffected by pressure or movement. Walking is accomplished with difficulty and if the upper part of the cord is affected, palpitation of the heart and dyspnea are present. Painful priapism and frequent nocturnal emissions occur.

HOUSE CONFINEMENT: The duration of this affection is from a few hours to several days, and house confinement does not often last longer than from 2 to 5 or 7 days unless myelitis supervenes, when a longer period of house confinement results.

TOTAL DISABILITY should seldom be over 1 week for individuals suffering with this affection, and if a longer time is claimed, it is almost sufficient proof that the diagnosis is incorrect and some other disease is causing the increased length of disability.

PARTIAL INDEMNITY FOR TOTAL DISABILITY if payable by the policy after the termination of house confinement is not often allowable following a period of total disability for this disease, and if demanded, 1 week should be ample in all cases.

EFFECTS: On account of the difficulty in diagnosis of diseases affecting the spinal cord and also of the possibility of a recurrence of the same disease and complications, insurance companies would seldom issue any kind of a policy to individuals having suffered from any disease or injury to this part of the body.

MIGRAINE

SYNONYMS: Hemicrania; megrim; sick, bilious or blind headache.

INFORMATION: Migraine is a paroxysmal pain in the head, occurring in persons of nervous temperament and is es-

pecially common in women. It is often inherited and may be due to menstrual disorders, overwork, eye strain, prolonged mental excitement, indigestion and anemia.

SIGNS AND SYMPTOMS: Attacks of migraine are often preceded by restlessness, nervousness, malaise and mental depression. The attack proper begins with nausea, vomiting, intolerance to light, inability to perform any mental labor, vertigo and sharp severe pains in the head causing a relaxation of the entire body. The pulse is usually soft and slow and the pupils contracted. This condition persists from a few hours to several days, when recovery gradually takes place.

HOUSE CONFINEMENT lasts from 1 to 2 or 3 days in very severe cases of this affection; mild attacks seldom produce any house confinement.

TOTAL DISABILITY rarely lasts more than from 2 to 4 days and therefore an individual suffering from an attack of this disease is not often entitled to indemnity under a health policy. Some few companies pay indemnity for total disability when less than a week is lost, but the majority do not pay for disability until the individual has been disabled one week and almost all industrial companies only pay indemnity from the beginning of the second week of disability and require house confinement in addition.

PARTIAL INDEMNITY FOR TOTAL DISABILITY is never payable following an attack of this affection.

EFFECTS: Individuals claiming indemnity for an attack of migraine, almost invariably have a history of frequent, previous attacks, and if these were not mentioned in the application, an insurance company would reject the claim. Individuals susceptible to this disease are generally insurable for all kinds of insurance if the attacks are not of frequent occurrence and do not last longer than from one to two or three days. Companies that pay indemnity for less than one week of total disability would not write health insurance on such a person without a waiver eliminating indemnity for this affection.

ACUTE CEREBRAL LEPTOMENINGITIS

SYNONYMS: Acute meningitis; cerebral fever; arachnitis.

INFORMATION: Acute leptomeningitis is an acute exudative inflammation involving the pia mater and arachnoid coverings of the brain and is caused by acute alcoholism, mental

overwork, insomnia, exposure to the sun or other forms of excessive heat, diseases and injuries of the internal ear and bones of the skull, syphilis, and sometimes follows blows to the head. It may be a complication of typhoid fever, la grippe, erysipelas or other infectious diseases and is more common in men in early adult life.

SIGNS AND SYMPTOMS: Attacks of this disease may be gradual in onset, being preceded by inability to sleep, headache, malaise and loss of appetite. When the disease begins suddenly, there is a chill followed by irregular high fever, nausea, cerebral vomiting, flushed face, photophobia, rapid pulse, severe headache, delirium and convulsions. The "tache cerebral" is usually present in attacks of this disease. As the stage of delirium becomes less, depression or collapse ensues, when the pulse is irregular and slow, the temperature is reduced, involuntary discharge of the urine and feces occur and coma supervenes.

DIFFERENTIAL DIAGNOSIS: *Tuberculous Meningitis* is usually a secondary affection, is most frequent in children and the onset is insidious. Tuberculous lesions can generally be detected involving some other part of the body; the lungs, joints or organs of the abdominal cavity being most commonly affected.

Abscess of the Brain in fifty per cent. of the cases follows middle ear disease, but may be caused by injuries to the head which have occurred some time previously and is best diagnosed by giving attention to the history of the case. For further information concerning this, see Abscess of the Brain.

Delirium Tremens may be mistaken for leptomeningitis and is best diagnosed by the eruption which appears in the latter disease and is absent in the first and also by the fact that cerebrospinal meningitis is almost invariably epidemic.

Cerebral Symptoms in Typhoid Fever resemble acute meningitis, but in typhoid fever there is seen the well known rose spots and other symptoms, such as distention of the abdomen, enlargement of the spleen, etc., and in this disease there is also obtainable the Widal reaction which is usually considered diagnostic of typhoid fever when it is present and the typical temperature curve of the disease.

HOUSE CONFINEMENT in mild cases of acute cerebral leptomeningitis lasts from 2 to 3 weeks; very severe ones require confinement to bed and the house for from 4 to 6 or 8 weeks.

TOTAL DISABILITY varies according to the severity of the disease. Individuals suffering from slight cases of meningitis

due to injuries of the head, are usually totally disabled only 2 to 3 weeks. If the inflammation is due to another cause, total disability may only last from 1 to 2 or 3 weeks and be followed by death, or a slow convalescence may be established and this form of disability will persist from 4 to 6 and sometimes 10 weeks.

PARTIAL INDEMNITY FOR TOTAL DISABILITY if payable by the policy after the termination of house confinement in cases which recover from a severe inflammation can usually be claimed for the limit of the policy on account of the impaired physical and mental condition as the result of the disease.

EFFECTS: Attacks of leptomeningitis are often fatal. Individuals having suffered a slight attack of this disease, are not insurable for any kind of a policy until one to two years have elapsed and no symptoms of the disease have occurred in that time. Severe attacks of meningitis in which recovery is slow, render an individual uninsurable for any kind of a policy, until two to five years after the illness and a medical report of an examination is favorable. When children suffer from this disease and fully recover, insurance of any kind can be granted after five years have elapsed and the medical examination is satisfactory.

HEMORRHAGIC PACHYMENINGITIS

SYNONYMS: Hematoma of the dura mater; pachymeningitis externa.

INFORMATION: Hemorrhagic pachymeningitis is a rare affection and is an inflammation of the external layer of the dura mater and is caused by contusions, fractures, penetrating wounds of the skull or secondary to an abscess. When this inflammation follows an injury, the period of disability would be covered by an accident policy and an insurance company would be liable for the payment of indemnity during this time. Should death take place within ninety days from the date of accident, the heirs of the claimant would probably demand that the face of the policy be paid for an accidental death, even though this disease supervened.

SIGNS AND SYMPTOMS are principally those of cerebral pressure following a history and evidence of an injury to the skull or abscess formation in which anorexia, insomnia, vertigo, persistent headache and photophobia occur and are followed by delirium, convulsions and coma.

HOUSE CONFINEMENT is uncertain, sometimes lasting from 1 to 3 or 4 days and again from 1 to 2 or 3 weeks. Death generally occurs early in this affection, and house confinement lasts from the date of injury—if an accident occurred—to the time the fatal termination takes place.

TOTAL DISABILITY varies and depends on the severity of the primary injury. It may only last from 1 to 3 days and be followed by death, or recovery may ensue and this period of disability may last from 3 to 6 or 10 weeks.

PARTIAL INDEMNITY FOR TOTAL DISABILITY may be claimed for the limit of the policy following an injury to the skull which produces this condition. Such cases, however, usually come under an accident policy, when partial disability would be payable for the length of time the individual was unable to properly attend to all his duties and this in the majority of cases would not be over 26 weeks or as long as the policy provided this form of indemnity.

EFFECTS: Individuals recovering from a blow to the head which produced a hemorrhagic pachymeningitis, would not be insurable for any kind of a policy until two to five years had elapsed after the date of accident and during which time no unfavorable symptoms had appeared.

ACUTE MYELITIS

SYNONYMS: Transverse myelitis; general diffuse myelitis; softening of the spinal cord.

INFORMATION: Acute myelitis is an acute inflammation of the substance of the spinal cord and may be limited to certain sections of it. It is caused by exposure to cold, syphilis, rheumatism, lead, mercurial or arsenical poisoning and is sometimes the result of injuries to the vertebral column. If this disease follows an accident involving the spinal column and the evidence of an external injury has been or is apparent, an accident insurance policy would cover the period of disability, and if death ensued within ninety days from the date of accident, the company would probably be liable for the face of the policy.

SIGNS AND SYMPTOMS: The onset of acute transverse myelitis is generally sudden, beginning with a chill, loss of appetite, coated tongue, constipation, pain in the back radiating into the limbs, partial or complete anesthesia of the skin of the limbs and moderate fever, the temperature running from 101° to 103° F.

A characteristic and prominent symptom is the girdle pain which is followed by paraplegia and involuntary discharges from the bladder and rectum; muscular atrophy, together with bedsores complicate this disease.

DIFFERENTIAL DIAGNOSIS: *Acute Anterior Poliomyelitis* is more common in children, although it is sometimes seen in adults; it is usually of short duration, anesthesia is not present and involuntarily discharges from the bladder and rectum do not occur.

Acute Spinal Meningitis is a rare disease and is generally due to an infection, although it may be caused by traumatism. It is characterized by severe pains, rigidity of the spine, spasmodic contraction of the muscles, hyperesthesia of the skin instead of anesthesia and absence of girdle pains.

Hemorrhage Involving the Spinal Cord may be the result of an accident or disease. In either case, the symptoms come on abruptly with slight paralysis and this becomes worse as the hemorrhage increases.

Hysterical Paraplegia occurs in individuals of an extremely nervous temperament. The paralysis appears and disappears frequently and without cause; nutrition or sensation is not impaired, although the latter may be absent in one part of the body and on the patient's attention being diverted, it immediately returns. A phantom tumor of the abdomen is sometimes present, but disappears on the administration of an anesthetic.

HOUSE CONFINEMENT depends on the part of the spinal cord involved. In acute ascending or central myelitis, death occurs early and house confinement is short, lasting from 1 to 3 or 4 days, sometimes from 1 to 2 weeks. When the disease is not so severe, house confinement may last from 2 to 4 or 6 weeks, death occurring during this time or recovery taking place in some cases.

TOTAL DISABILITY seldom lasts over 5 to 14 days in either acute transverse or central myelitis, as death almost invariably occurs during this time. Should recovery take place, the length of total disability is uncertain depending on the site of the disease, the extent to which the cord has been involved and the resulting spinal irritation and permanent paralysis. These cases are often totally disabled from 2 to 4 or 6 months and sometimes longer.

PARTIAL INDEMNITY FOR TOTAL DISABILITY if payable by the policy for the period of convalescence, may be-

gin at the termination of house confinement and usually persists to the limit,—which in practically all policies is never over 26 weeks.

EFFECTS: Individuals having suffered from this disease are never insurable for any kind of a policy, and if an accident or health policy is held by such a person it should be cancelled at once.

NEURALGIA

SYNONYMS depend on the location of the inflamed nerve. Tic-douloureaux, prosopalgia, Fothergill's disease, or trifacial neuralgia is an inflammation of the fifth nerve; cervico-occipital cervico-brachial, dorso-intercostal and lumbo-abdominal neuralgia are names which simply indicate the position of the inflammation. Erythromelalgia or "red neuralgia" was first described by Dr. S. Weir Mitchell and affects the feet.

INFORMATION: Neuralgia is an inflammation involving different nerves of the body, it is more common in adults and frequently follows exposure to cold and dampness. It may also be of reflex origin and is seen in some diseases, such as chronic lead poisoning, rheumatism, syphilis, gout and malaria. Traumatic neuralgia, according to Bailey, is rarely seen involving any of the cranial nerves, but infrequently injuries of the shoulder and elbow joints result in neuralgic pains.

SIGNS AND SYMPTOMS: An attack of neuralgia in any part of the body usually lasts from a few hours to several days, when it disappears and may not return again for weeks or months or until exposure causes a recurrence. Severe, lancinating, pounding pain is the most prominent symptom of the disease, although tenderness over the area supplied by the inflamed nerve, sometimes swelling and a pinkish hue to the skin may be present. Convulsive twitchings of the muscles controlled by the inflamed nerve are occasionally seen. Intercostal neuralgia is frequently accompanied by the formation of vesicles over the course of the nerve, this being known under the name of herpes zoster. Red neuralgia affects the feet and is characterized by intense redness and a burning pain of these extremities which is relieved by elevating them.

DIFFERENTIAL DIAGNOSIS: *Simple Neuritis* often follows wounds to the nerves, although exposure to cold and dampness may be the cause. In this affection the larger nerves

are generally involved with a continuous dull pain, tenderness along the course of the nerve, and when the inflammation persists for any length of time, the peculiar glazed surface, with swelling beyond the point of inflammation is present.

Locomotor Ataxia in the beginning stages may be taken for neuralgia, the diagnosis of this affection, however, is soon made by the presence of Romberg's symptom, Argyll-Robertson pupil and absence of the patellar reflex.

HOUSE CONFINEMENT is not present in mild or severe attacks of this disease when it occurs during the warm months of the year. Slight attacks of facial neuralgia cause house confinement of from 1 to 3 or 4 days during cold weather, while severe attacks may confine the claimant within the house from 1 to 2 weeks. Attacks of intercostal neuralgia accompanied by herpes, require from 1 to 2 or 3 weeks of house confinement, this time depending on the season of the year and the severity of the eruption.

TOTAL DISABILITY in mild cases occurring in the spring and fall in which house confinement has lasted from 1 to 3 or 4 days, cause total disability of the same length of time, and indemnity for such a period is not often payable, except by a few companies whose policy pay for disability when it has not been of a week's duration. Severe attacks of this disease during the warmer months of the year sometime demand total disability of 1 to 2 weeks. Mild cases affecting the nerves of the face and occurring during the winter months, may require house confinement of from 4 to 7 days when total disability must be paid for this length of time. Severe cases occurring during cold weather and which terminate under the same weather conditions, require from 1 to 3 weeks of total disability, and if the inflammation involves the intercostal nerves, total disability lasts from 2 to 4 weeks, when this affection is present during winter weather.

PARTIAL INDEMNITY FOR TOTAL DISABILITY is rarely payable on account of the individual being able to resume all the duties of the occupation as soon as total disability has ended.

EFFECTS: Infrequent attacks of neuralgia have no bearing on the insurability of the individual, but if this disease occurs frequently and produces disability of one to two or three weeks once or twice a year, an insurance company would not issue a health policy on such a person unless it contained a waiver eliminating indemnity for this affection. Severe cases of trifacial neuralgia

that have persisted for weeks, months and sometimes even years, with slight periods of exacerbations are not insurable for any kind of a policy, as such cases usually terminate in the removal of the gasserian ganglion and as this is a most serious operation, no insurance company would care to have a policy on such a person.

NEURASTHENIA

SYNONYMS: Nervous prostration; nervous exhaustion; spinal irritation.

INFORMATION: Neurasthenia is a functional disease that occurs at all seasons of the year and is more common in men than women. It is characterized by a lessened desire or inability to accomplish the various duties of the occupation and results from mental overwork, over indulgence in alcohol and tobacco, sexual excesses and from various chronic diseases. Insurance companies look with much disfavor upon claims arising under disability policies for the above disease when the period of disability occurs during vacation time and the individual claims he is sent by his attending physician to the country to recuperate. It is of course possible that this condition might be brought on during the summer months, but it is highly improbable and claims for disability under these conditions should have the closest investigation, and almost invariably it can be proved that the individual is simply taking a vacation and expecting to be paid for it by the company with whom insurance is carried. Bailey says "the fact that it may develop primarily as the result of injury and shock has only been recognized in recent years. When occurring in this way, it is called traumatic neurasthenia and differs only in slight particulars from neurasthenia due to other causes."

SIGNS AND SYMPTOMS: True cases of neurasthenia are preceded with a history of prolonged mental activity with little rest or one of the other causes which produce this disease, and one of the earliest symptoms is nervous irritability combined with weakness and inability to concentrate the mind for any length of time when mental work is attempted. It results in headache, restlessness, nervousness, depression, insomnia and a number of other vague symptoms attributable to the nervous system. Anorexia, constipation, insomnia, change in disposition, pain in the back, marked prostration after exercise, tenderness along the spinal column, palpitation of the heart, loss of sexual power in

the male and painful or suppressed menstruation in the female are some of the other symptoms complained of in this disease. Loss of weight is always present in true cases of neurasthenia and is one of the most important diagnostic points for differentiating between this disease and hysteria or so-claimed cases of neurasthenia.

DIFFERENTIAL DIAGNOSIS: *Hysteria* should be distinguished from neurasthenia without much trouble. In hysteria there is no loss of weight, the individual is subject to various emotional outbreaks with changeable areas of anesthesia and contractures of the muscles. This condition is more frequent in women than in men.

Claims for disability alleging neurasthenia as the cause when the disease is not present, are usually made during July and August and no history of any condition that would cause neurasthenia is obtainable; the claimant is temporarily out of employment, a sojourn in the country is said to have been recommended by the attending physician and the individual promptly betakes himself into an inaccessible part of the country in the hope that the examiner of the company will be unable to reach him. There is no loss of appetite or inability to sleep and weight does not decrease, but within a short time increases.

COMPLICATIONS: *Neurasthenia* is often complicated by chronic diseases of the heart, liver, kidneys or lungs and in such cases disability is greatly prolonged and the time is generally governed by the complication and not by the nervous condition. When neurasthenia occurs and a diseased condition of some of the organs of the body exists in conjunction with it, it is important to know when the policy was issued, as all health or disability policies do not go into effect until a certain time after the signing of the application and in that application the individual warrants that he is in good health. Therefore, if a claim for neurasthenia should arise under a health or disability policy within a short time after it was issued and be complicated with a chronic disease, such a fact would be sufficient evidence to show that the individual was suffering from the chronic disease before the policy was written and secured it through fraudulent means; thereby releasing the company from any liability.

HOUSE CONFINEMENT does not actually exist in claimed cases of this disease in which there is a fraudulent intent. Mild cases of neurasthenia require house confinement of from 3 to 10 days, at the end of which time the individual is ordered into

the open air by the attending physician. In severe cases and especially those in which the "rest cure" is used, house confinement of from 3 to 6 weeks is necessary and this time is almost invariably spent in bed.

TOTAL DISABILITY in neurasthenia is very uncertain; depending on the individual, the surroundings, the severity of the disease, the opportunity for proper treatment and various other conditions. Cases in which house confinement has lasted from 3 to 10 days are not often totally disabled more than from 4 to 6 or 8 weeks. Severe cases in which house confinement has existed from 3 to 6 weeks, are usually totally disabled from 8 to 12 or 16 weeks.

PARTIAL INDEMNITY FOR TOTAL DISABILITY when provided by the policy, covers the period of disability beginning from the termination of house confinement to the time the occupation is resumed. In such cases, total disability is only paid for house confinement and partial indemnity for total disability for the remainder of the time that disability lasts.

EFFECTS: Individuals having suffered from a mild attack of neurasthenia in which disability has persisted from four to eight or ten weeks, are not insurable for any kind of a policy until nine to twelve months have elapsed after complete recovery and no evidence of the return of the disease has shown itself. Severe cases of neurasthenia requiring two to three or four months before the individual is able to resume work, are not insurable for a life or health policy until two to three years have elapsed after the date of recovery and good health has existed during that time. Accident insurance can usually be written on such individuals one year after the termination of disability from neurasthenia.

NEURITIS

SYNONYMS: Simple Neuritis.

INFORMATION: Neuritis is an acute inflammation of the nerve trunks and is caused by exposure to cold and dampness, traumatism resulting in direct injury to the nerves themselves or compression due to swelling or inflammatory products. It may also be secondary to certain diseases as syphilis, rheumatism, gout or some of the infectious fevers; sometimes it follows lead poisoning and excessive use of alcohol.

SIGNS AND SYMPTOMS: Acute cases of neuritis which

are not due to injury, may begin with a vague feeling of uneasiness in the parts about to be affected. This is soon followed by a burning, tingling pain along the course of the nerve trunk that is involved and over this is found tenderness on pressure and sometimes slight swelling marks the course of the nerve. Swelling of the extremity beyond the point of inflammation with glazing of the skin and loss of power are also seen in this disease. If a neuritis follows an accident, there is a history of such and in the majority of cases external evidence of an injury to some part of the extremities which may result in this inflammation. When this disease arises from such a cause it is usually slow in onset, showing itself a few days after the accident has occurred and gradually becoming worse until total disability exists in the extremity affected.

DIFFERENTIAL DIAGNOSIS: *Neuralgia* is an inflammation of the smaller nerves and is attended by paroxysmal, pounding pain and is sometimes accompanied by herpes. There is little if any tenderness over the course of the nerve and loss of power does not occur.

Myalgia involves muscles or groups of muscles and is characterized by exquisite tenderness over a large surface of skin, and on movement sharp, lancinating pain in the affected muscles.

HOUSE CONFINEMENT depends on the cause of the disease, the severity and location. When a slight neuritis occurs in the upper extremities, house confinement seldom exists. Severe cases of neuritis involving the arms causes house confinement of from 1 to 3 weeks. Cases involving the lower extremities results in house confinement, but this time is variable; from 3 to 7 days in slight attacks and from 2 to 4 weeks for more protracted ones.

TOTAL DISABILITY in individuals suffering from slight attacks of this disease affecting the upper extremity is short and sometimes does not exist at all. If the attack has been severe and the same parts are involved, total disability lasts from 1 to 3 weeks; this time seldom extending beyond the limit of house confinement. When the disease occurs in summer, total disability is usually about 1 week shorter than when cold weather is existing. Neuritis involving the nerves of the lower extremity, causes total disability of from 1 to 4 weeks and is shortened or lengthened according to the weather conditions at the termination of the inflammation.

PARTIAL INDEMNITY FOR TOTAL DISABILITY

does not often follow this disease when it appears as a complication for some preceding illness, but partial disability often follows a period of total disability when the disease has been caused by an accident. Sometimes total disability does not exist in cases due to traumatism, the individual being partially disabled all the time disability exists. In such cases partial disability usually lasts from 2 to 4 weeks. Cases of neuritis due to injury which are not properly treated by rest from the date of accident, result in long periods of partial disability; sometimes from 2 to 4 or 6 months being necessary before complete use of the extremity is regained.

EFFECTS: Individuals having suffered from an attack of neuritis are insurable for any form of policy from two to three months after complete recovery, unless the disability has lasted from three to six months or more, when an accident or health policy would hardly be issued until one year had elapsed without any signs or symptoms referable to the disease and a medical examination was satisfactory. Even after a long period had elapsed, an insurance company would probably place a waiver on a health policy eliminating indemnity for disability due to this condition.

MULTIPLE NEURITIS

SYNONYMS: Polyneuritis; degenerative, peripheral or disseminated neuritis; alcoholic paralysis; pseudo-tabes; beriberi; Kaaké.

INFORMATION: Multiple neuritis is an inflammation of a number of nerves and is caused by exposure, alcoholism, rheumatism, syphilis, malaria, metalic poisons and sometimes follows some of the acute infectious diseases. It is rarely seen under twenty-five years of age and most commonly occurs in persons from thirty to fifty years old, women being more frequently attacked. When this disease occurs endemically as it does in the tropics, it is supposed to be caused by a micro-organism.

SIGNS AND SYMPTOMS may appear suddenly and result in death within a short time, but more often evidence of this disease develops gradually with loss of appetite, coated tongue, moderate fever, pain and tingling in the affected limbs, with areas of hyperesthesia or anesthesia. The motor phenomena are weakness in the affected limbs, loss of power, absence of reflexes, with atrophy of the muscles and edema of the upper and lower extremities.

DIFFERENTIAL DIAGNOSIS: *Locomotor Ataxia* is sometimes confounded with this disease, but in ataxia there are three prominent and diagnostic points; Romberg's symptom, Argyll-Robertson pupil and absence of the patellar reflex.

Pachymeningitis Interna when suspected shows persistent headache, gradual impairment of mental faculties, photophobia and later delirium, convulsions and coma and these are not usually present in multiple neuritis.

HOUSE CONFINEMENT occurs in the acute stages of this disease and may last from 1 to 3 or 5 weeks; at the end of which time the individual can generally get around and is permitted to be in the open air. Such cases become chronic and house confinement exists at various times during the course of the disease.

TOTAL DISABILITY is extremely uncertain, sometimes lasting from 1 to 2 weeks when death ensues. In other cases the disease becomes chronic and total disability lasts for months or years.

PARTIAL INDEMNITY FOR TOTAL DISABILITY if payable by the policy after the termination of house confinement, would demand the limit of the policy in the majority of cases.

EFFECTS: Individuals suffering with this disease are not insurable for any kind of a policy and if they are in possession of a health policy, an insurance company would endeavor to settle the claim at once by allowing a large advance settlement and cancelling as soon as a release was obtained.

OCCUPATION NEUROSIS

SYNONYMS: Professional neurosis; artisans', writers', dancers', telegraphists', violin and piano-players' cramp.

INFORMATION: An occupation neurosis is an affection of the nervous system resulting from constant repeated movements of certain muscles which finally result in loss of power and more or less paralysis in the parts affected. The hands are most commonly involved, although sometimes this affection exists in the feet. Accident policies do not cover disability due to any of the above causes. Total disability exists in the majority of cases, although some individuals when affected with this disease quickly learn to use the opposite hand, which, however, in a short time, frequently becomes similarly affected.

SIGNS AND SYMPTOMS are gradual in onset; first beginning with a stiffening in the parts about to be affected and this is followed by a sense of weight and fatigue which becomes so great that the extremity is soon useless. In addition there is usually pain in the muscles involved, tremors, spasmodic contractions and sometimes paralysis. Mental worry and depression are associated with the various forms.

DIFFERENTIAL DIAGNOSIS is not difficult when the history is obtained, as the affection is usually unilateral in the beginning and limited to one extremity; generally the one most constantly used in the occupation.

Chronic Lead Poisoning causing paralysis of one of the extremities may be mistaken for an occupation neurosis, but in the former there is seen the familiar blue line on the gums, a dry harsh skin of a sallow or yellowish color and yellowishness of the conjunctiva. In addition there is a history of one or more attacks of lead colic in practically all cases.

COMPLICATIONS: *Nervous Irritability* which may go on to depression and melancholia sometimes complicates this affection and when it exists, disability is prolonged and the prognosis is often unfavorable.

HOUSE CONFINEMENT is not necessary for persons suffering with any form of an occupation neurosis; the individual making better progress in the open air and surrounded by friends and excitement.

TOTAL DISABILITY is almost impossible to approximate, being extremely uncertain. Some individuals affected with this disease in only one hand rapidly learn to use the other, when total disability does not last more than from 2 to 3 or 4 weeks, unless the other hand becomes affected, when it is again very uncertain and if both hands are involved total disability may last from 1 to 2 or 4 months and even longer.

PARTIAL INDEMNITY FOR TOTAL DISABILITY is sometimes allowable in these cases, but depends altogether on the wording of the policy. If it provides house confinement for total disability, partial indemnity for total disability begins at the termination of this period and lasts for a limited time as provided in the policy.

EFFECTS: An individual having suffered disability from an occupation neurosis, is not insurable for an accident or health policy unless complete recovery has ensued and no signs and symptoms have been present for one to two years after the date

of recovery, when an application would be considered. Life insurance could be written on such a person from six to twelve months after recovery has been complete and the individual has assumed a new occupation and passed a satisfactory medical examination. Insurance companies having claims from such a cause are usually willing to settle in advance and pay a reasonable figure for a release, provided there is liability on their part.

FACIAL PARALYSIS

SYNONYM: Bell's Palsy.

INFORMATION: Facial paralysis results from pressure on the seventh cranial nerve and is an acute condition which may be caused by exposure of the side of the face to cold air and draughts, middle ear disease, syphilis, injuries or any condition that will produce an exudation along the course of the nerve, thus resulting in pressure and paralysis beyond the point of inflammation. It is sometimes a sequelæ of rheumatism or the infectious fevers.

SIGNS AND SYMPTOMS: The onset of this form of paralysis is generally sudden with tingling in the tongue and lips and sometimes loss of the sense of taste. The side of the face involved is motionless and without expression, the angle of the mouth droops, whistling or smiling is impossible, the unaffected muscles pull the face to the side opposite to that involved in the paralysis, with the result that the expression is laughable, and any movement as talking, smiling, etc., makes the individual appear grotesque.

FIG. 95.—FACIAL PARALYSIS. Six weeks after injury. Effort to close eye. (Harvey Cushing).

DIFFERENTIAL DIAGNOSIS: *Paralysis* of this nerve due to accidental injuries has a history of such and evidence of external injury is apparent, such as swelling and discoloration on the same side of the face, the sense of taste is unimpaired and the uvula is not affected by the paralysis.

Exposure to Cold as the cause of this paralysis is often seen in individuals who drink to excess and while in such a condition exposure results in facial paralysis. These cases have no history of an accident, no evidence of any inflammatory product, the sense of taste is normal and the uvula is not affected by the paralysis. Such claims would probably not be paid by any insurance company if the facts were known.

Middle Ear Disease may produce facial paralysis, if so there is evidence of a discharge from one or both ears, sometimes pain over the mastoid process, the sense of taste is lost or impaired and paralysis of the uvula exists, causing it to hang in an oblique position.

Pressure Within the Skull may result in Bell's palsy, but usually when this is the cause, other portions of the body are affected and paralysis of the muscles of the face is only partial, the upper part not often being involved. Cerebral symptoms are always present when pressure is within the brain.

COMPLICATIONS: *Facial Paralysis* frequently exists as a complication to some other acute disease, and in such cases, disability is prolonged by the complication.

HOUSE CONFINEMENT is not often necessary in uncomplicated cases of Bell's palsy, unless the paralysis exists during the winter months when 3 to 7 days of house confinement may be required. Individuals whose occupation demands constant talking, often remain in the house from 1 to 2 or 3 weeks, but this is generally due to pride and while an insurance company does not contemplate paying for loss of time for such a reason, yet it is seldom that indemnity will be refused when these conditions exist.

TOTAL DISABILITY is only deserved in the class of risks who use the voice in the occupation, such as singers, public speakers, etc., when 1 to 2 weeks are usually sufficient. Claims for total disability when the cause is alleged to be due to cold, should be most closely investigated, as most of these are due to exposure following over indulgence in alcoholic liquor.

PARTIAL INDEMNITY FOR TOTAL DISABILITY if payable by the policy after the termination of house confinement is rarely deserved by any class and certainly is not payable when total disability has been allowed for a period of house confinement. If the paralysis follows an injury, partial disability also is not allowable, except in persons whose occupation demands almost continuous use of the voice.

EFFECTS: Individuals having suffered from facial paralysis in which the cause has been traumatism or exposure, are insurable as soon as the condition disappears,—provided the moral hazard is good. When the paralysis is due to middle ear disease or pressure within the skull, such persons are not insurable for any kind of a policy until some time after the cause of the paralysis has disappeared; and in the case of middle ear disease, they are not insurable for a life or health policy until three to five years have elapsed after complete cessation of the aural discharge. Accident insurance would be issued by some companies as soon as the muscles on the affected side regain their normal tone, irrespective of any existing ear disease.

SCIATICA

SYNONYMS: Sciatic rheumatism; neuralgia of the sciatic nerve; hip-gout.

INFORMATION: Sciatica is an acute or chronic inflammation of the sciatic nerve which generally shows itself in individuals troubled with rheumatism or gout and after exposure to cold and dampness has occurred. It is also present in those suffering with syphilis and metalic poisoning and follows accidents to the hip or thigh in which the injury involved this nerve.

SIGNS AND SYMPTOMS: The onset of an attack of sciatica may be sudden or gradual, commencing with tingling along the course of the nerve and numbness in the extremity. The tingling soon becomes a sharp, severe, lancinating pain which occurs in paroxysms lasting various lengths of time and extending down the thigh into the leg, foot and toes. This pain is increased on the slightest movement and tenderness exists along the course of the nerve, but sometimes only in spots.

DIFFERENTIAL DIAGNOSIS: *Coxalgia* is characterized by pain inside the hip joint and this is made worse by pressure over the great trochanter. It is also referred to the inner surface of the knee joint and pressure over the course of the sciatic nerve fails to elicit any tenderness which would be the case in sciatica.

COMPLICATIONS: *Sciatica* often exists as a complication of some other disease, and when found the disability resulting from the primary disease is lengthened according to the time required for this complication.

HOUSE CONFINEMENT lasts from 1 to 2 weeks in the

average case of inflammation of this nerve and this time may be prolonged from 2 to 7 days when the termination of this disease occurs during damp, wet weather. Severe cases require from 2 to 4 or 6 weeks of house confinement.

TOTAL DISABILITY in mild cases lasts from 1 to 3 weeks; the usual time, however, being 2 weeks. Sciatica sometimes becomes subacute or chronic, in which event total disability may last from 2 to 4 months. When the termination of the disease occurs during the winter months, the above time in acute cases may be prolonged 2 to 7 days.

PARTIAL INDEMNITY FOR TOTAL DISABILITY if payable by the policy after the termination of house confinement is sometimes allowable. When sciatica occurs during the summer months, from 2 to 4 or 6 weeks may be necessary, but the period for which full indemnity is paid for total disability is shortened.

EFFECTS: Individuals having suffered from an attack of sciatica are insurable for any kind of a policy from four to six months after complete recovery, but good underwriting would demand a waiver eliminating indemnity for this disease under a health or disability policy to any one having suffered from one or more attacks.

SPINAL MENINGITIS

SYNONYM: Leptomeningitis spinalis.

INFORMATION: Spinal meningitis is an inflammation of the membrane covering the spinal cord and results from infection from tubercle bacilli, syphilis, traumatism, typhoid fever or septicemia. It is a rare disease and is usually described as being acute or chronic.

SIGNS AND SYMPTOMS in the acute form come on gradually with a boring pain in the back which is made worse by movement and which follows the course of the spinal nerves causing a sensation of constriction around the body, rigidity of the spine, tenderness, and when the exudation is sufficient, slight anesthesia or paralysis of the limbs is present if the pressure is in the lumbar region; when above, interference with the heart and respirations is seen. Inability to extend the flexed leg—Kering's sign—with fever, chills and prostration are always present.

DIFFERENTIAL DIAGNOSIS: *Myelitis* is generally sudden in onset, the pain is of less intensity, paralysis occurs earlier

and is more complete, bed-sores are common and involuntary discharges from the bladder and rectum follow.

Tetanus always has a history of a wound inflicted one to two or three weeks before signs and symptoms of this disease manifest themselves; fever is absent, the muscles of the jaw are early involved and marked tenderness does not exist over the spinal column.

COMPLICATIONS: *Cerebrospinal Meningitis* almost always occurs in conjunction with this disease and the length of disability is according to the time required for recovery from the former disease.

HOUSE CONFINEMENT: Spinal meningitis almost invariably ends in death and house confinement commences with the illness and continues until a fatal termination takes place. The few cases which do recover have long periods of house confinement, from 1 to 3 or 4 months often being necessary, and this is especially true if the disease occurs during the fall, when the individual is confined in the house until warm weather returns.

TOTAL DISABILITY may last from 1 to 3 weeks, but usually death ensues about 10 days after the commencement of the disease. When recovery takes place, total disability lasts from 1 to 2 or 4 months and sometimes longer; the time depending on the rapidity with which the inflammatory products which produce the paralysis are absorbed.

PARTIAL INDEMNITY FOR TOTAL DISABILITY may be payable if the policy provides such a contingency on the termination of house confinement. Such cases generally run the limit of the policy. If this disease follows an injury, partial disability is also, usually payable for the full time allowed by the policy.

EFFECTS: Adults having suffered from spinal meningitis are never insurable for any form of policy. If the inflammation occurs during childhood and all effects have disappeared, such a person would be insurable for all forms of insurance when adult life was reached,—if the medical examination was satisfactory.

SUN STROKE

SYNONYMS: Thermic fever; heat stroke; heat exhaustion; insolation; siriasis; coup-de-soleil.

INFORMATION: Thermic fever follows exposure to ex-

cessive high temperature; either the sun's rays or artificial heat. It is more frequent in summer than winter and occurs more often when the body is fatigued or debilitated by excesses of any kind. Accident insurance policies pay a specific sum according to the company writing the insurance for death from sun stroke, if it occurs independent of all other cases and within ninety days from exposure. Such policies, however, do not often pay weekly indemnity and therefore when sun stroke occurs and disability follows, weekly indemnity is not payable unless the individual carries a general disability policy.

SIGNS AND SYMPTOMS depend on the nature of the exposure.

Sun Stroke develops suddenly and is often preceded by nausea, headache, vertigo and a sense of exhaustion. Unconsciousness appears early, the face is flushed and hot, the eyes injected, the pulse is rapid, respirations are quick and shallow and the temperature is high, ranging from 106° to 110° F.

Heat Exhaustion also develops rapidly, sometimes being preceded by a sense of weakness which is followed by prostration, the face is pale and cool, the skin moist, respirations increased, pulse rapid and feeble and the temperature subnormal, sometimes as low as 95° to 96° F. Complete relaxation of the muscles, with partial or complete unconsciousness and sometimes tremors or convulsions are present.

DIFFERENTIAL DIAGNOSIS: *Coma* due to injuries, alcohol, uremia and other causes may be mistaken for unconsciousness due to sun stroke, and these forms have all been described under Apoplexy. Usually the history and season of the year, however, will serve to make the proper diagnosis in cases of sun stroke.

SEQUELAE almost invariably follow cases of sun stroke.

Persistent Headache or Vertigo may supervene and be present to a more or less marked degree during the warm months of the year or whenever the individual is exposed to a temperature of 80° F or over.

Epilepsy, Impaired Mental Activity or Insanity often follows cases of sun stroke, becoming permanent or persisting for a variable time.

Sensitiveness to high temperatures almost invariably results from sun stroke and lasts for several years or more. In such cases during the hot months of the year, much inconvenience and

vague symptoms are complained of by persons having suffered from sun stroke.

HOUSE CONFINEMENT: *Sun Stroke* cases are treated in the open air whenever possible, and house confinement under these circumstances means the time spent in bed and this is usually from 1 to 2 weeks when recovery follows this exposure. Many cases of sun stroke succumb within 24 to 48 hours.

Heat Exhaustion generally requires from 1 to 3 weeks confinement to bed and the house; this time depending on the severity of the exhaustion present on account of the exposure to high artificial heat.

TOTAL DISABILITY in cases of sun stroke or heat exhaustion which are not followed by death, lasts from 1 to 3 weeks; the average time, however, being about 10 days. Severe cases of sun stroke sometimes require from 3 to 6 weeks of total disability and this is especially true if the occupation of the individual affected requires much mental activity. Complications prolong the above periods of disability.

PARTIAL INDEMNITY FOR TOTAL DISABILITY if allowed by the policy is rarely payable in addition to the above time.

EFFECTS: Young adults having suffered an attack of sun stroke or heat exhaustion, are generally insurable for all kinds of insurance from one to two years after the date of exposure. Individuals over forty years of age would hardly be considered insurable for a life or health policy until at least two to five years had passed after the date of the sun stroke or heat exhaustion. An accident policy, however, could be written one year after the date of exposure unless some complication was present, such as attacks of vertigo, epilepsy, etc.

TETANUS

SYNONYMS: Lock-jaw; trismus; cephalic tetanus.

INFORMATION: Tetanus is an acute infectious disease due to a specific bacillus,—the bacillus of tetanus,—which gains entrance to the circulation through an abrasion or opening of some kind in the skin, and almost invariably this opening has been produced accidentally and a history of an accident is obtainable. Therefore, disability caused by this disease is usually considered as being covered by an accident policy and insurance companies generally pay these claims when presented. If an indi-

vidual is carrying an accident and general health policy, it of course would make no difference as to the manner in which the disease was contracted as far as weekly indemnity was concerned, for the reason that if the accident policy did not cover the disability, the general health policy would do so and the company would be liable for the resulting weekly indemnity. Should death occur, however, it would be highly important to know the manner in which the disease was contracted. If accidental in origin, the company would probably be liable for an accidental death—provided it occurred within ninety days—and if not accidental in origin, no death indemnity would be payable by the company. Tetanus is more common in warm climates and in men than in women and generally occurs between ages of ten and forty years.

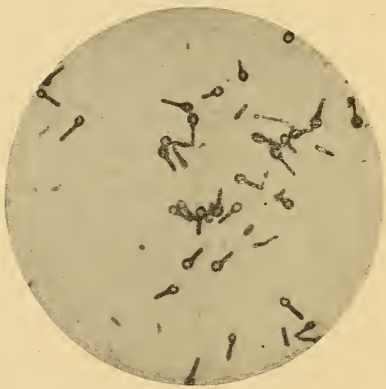


Fig. 96.—Bacillus of Tetanus × 1000. (Frankel and Pfeiffer).

SIGNS AND SYMPTOMS: An attack of tetanus begins from a few days to three or four weeks after the bacilli gain entrance. There first appears a stiffening in the muscles of the neck and lower jaw and this gradually extends and involves those in the back, abdomen and lower extremities. Swallowing is difficult, extreme hyperesthesia exists and spasms of the muscles occur and are accompanied by intense pain. The lower jaw is tightly closed against the upper and opisthotonos is present.

DIFFERENTIAL DIAGNOSIS: *Strychnine Poisoning* takes effect suddenly or gradually. If the former, sudden contractions of the muscles may throw the body several feet, when it becomes rigid and remains in this position for a short time, when relaxation takes place. If the onset is gradual, there is no history of a wound and usually there can be obtained a history of swallowing the poisoning intentionally or accidentally. The muscles of respiration are more affected in strychnine poisoning and the convulsions are tonic in character, but with usually short periods of relaxation between the spasms and these periods of quiet do not occur in tetanus.

Hydrophobia is characterized by a respiratory spasm which is excited by attempts at swallowing; mental symptoms are evi-

dent and trismus does not exist. Hydrophobia not only has a history of an injury, but almost invariably scars from the bite are found on examination.

HOUSE CONFINEMENT begins when the disease shows itself and ends at the time of recovery or a fatal termination occurs and this latter seldom requires over 5 to 10 days. Cases which go on to recovery are confined in the house from 2 to 4 weeks; this time depending on the severity of the attack.

TOTAL DISABILITY in the majority of cases is short and lasts only during the time required for house confinement, which is from 3 to 10 days in the majority of cases. Individuals who recover from tetanus are totally disabled from 3 to 5 weeks or more. If the skull is trephined, total disability is increased from 3 to 4 weeks from the date of operation.

PARTIAL INDEMNITY FOR TOTAL DISABILITY: As this disease is usually accidental in origin, partial disability is payable after the termination of total disability and lasts from 2 to 4 weeks in cases which recover without an operation. If this is performed, partial disability—following an increased period of total—lasts from 3 to 6 or 8 weeks, depending on the result of the operation and the duties of the occupation.

EFFECTS: Individuals having suffered from an attack of lock-jaw in which recovery takes place without any complication or operation, are insurable for all kinds of insurance from four to six months after the date of complete recovery. If an operation has been necessary and recovery has been complete, insurance of all kinds can be issued from nine to twelve months after the date of operation.

CHAPTER XIV

DISEASES OF THE CIRCULATORY SYSTEM

ANEMIA

SYNONYM: Spanemia.

INFORMATION: Anemia is described as a deterioration of the blood, with altered relations of the fluid and solid parts (Stengel) and is more common in the female sex. It may be due to overwork—either mental or physical—squalid surroundings, prolonged and excessive nursing, cancer, Bright's disease, syphilis, malaria or chronic intestinal diseases.

SIGNS AND SYMPTOMS are pallor of the skin and gums, loss of appetite, poor digestion, muscular weakness, increased respirations, rapid pulse with often a hemic murmur, headache, vertigo and fainting, together with lack of desire for mental or physical work.

DIFFERENTIAL DIAGNOSIS: *Anemia* is not often hard to differentiate. It frequently occurs as a complication to other diseases and in such cases, the period of disability is controlled by the more serious illness or prolonged by the complication.

Leucocythemia resembles anemia in the general symptoms, but in this disease the number of white cells is enormously increased, sometimes reaching as high as five hundred thousand in a cubic millimetre.

HOUSE CONFINEMENT does not exist in the early stages and when present indicates that the disease has been existing for some time. For how long, however, that this condition has been present it is impossible to predicate. House confinement may exist during the winter months and last from 3 to 6 weeks or longer; depending on the termination of the disease, either by recovery or death. If the latter, from 10 to 20 weeks may be necessary before this takes place.

TOTAL DISABILITY lasts from 2 to 4 weeks in cases of anemia that have been going on for some time or until total disability ensues, when by proper treatment, rest, etc., this length of time is usually sufficient for the individual to have recovered

enough to return to some of the duties of his occupation. When the case goes on to a fatal termination, from 10 to 20 weeks or more may be required before death occurs.

PARTIAL INDEMNITY FOR TOTAL DISABILITY may be payable if the policy provides this form of indemnity after the termination of house confinement. In such cases, this may last from 2 to 6 weeks.

EFFECTS: Individuals with a history of having suffered with anemia, are considered doubtful risks by insurance companies and therefore are seldom insurable for any form of a policy unless the disease has occurred a number of years previously and from five to ten years have elapsed without any symptoms referable to it. In such cases an application for different forms of insurance when accompanied by the report of a medical examination would be considered.

ANGINA PECTORIS

SYNONYMS: Neuralgia of the heart; stenocardia; breast-pang.

INFORMATION: Angina pectoris is a paroxysmal disease characterized by sharp pains in the region of the heart which sometimes extend into the left shoulder and arm. It is much more frequent in men than in women and is more common after middle life, being due to any condition which causes hardening of the coronary arteries.

SIGNS AND SYMPTOMS: The attack comes on suddenly during the early morning hours, when there is severe pain over the heart with a sense of constriction about the body, increased respirations, feeble pulse, rigidity of the body, great anxiety for fear of approaching death; the face is pale with a cold perspiration on the forehead and breathing is difficult. These attacks last from a few seconds to several minutes, when death occurs or recovery takes place and another attack is not suffered for some weeks or months and during this time there is an entire absence of symptoms.

DIFFERENTIAL DIAGNOSIS: *Pseudo-Anginal* attacks occur almost invariably in women of nervous temperament and commence gradually with emotional outbreaks, such as laughing and crying, distention of the abdomen, diffused precordial pain and the usual symptoms of hysteria. These pseudo attacks last

longer than true anginal attacks and there is no evidence of any organic disease of the heart or arteries.

COMPLICATIONS: *Bright's disease, Syphilis, Rheumatism, Gout* and other chronic diseases often complicate attacks of angina and perhaps have something to do in causing this condition. When any of these complications are present and disability occurs, it is caused by the complication and not by the attack of angina.

HOUSE CONFINEMENT: On account of the short duration of attacks of angina pectoris, house confinement is not necessary, but individuals sometime remain in the house for several days to recuperate and in the fear that another attack may occur.

TOTAL DISABILITY should not be paid on claims which give as the cause, attacks of this disease, unless the policy pays for less than one week of total disability when 1 or 2 days may sometimes be required.

PARTIAL INDEMNITY FOR TOTAL DISABILITY is not allowable in any case.

EFFECTS: Individuals having suffered from attacks of angina are not insurable for a life policy, unless the disease has not shown itself for five to ten years or more and the individual is under forty years of age. If over this age and with the above history, life insurance would not be considered, but accident or health insurance might be written at any time with a waiver on the health policy eliminating indemnity for disability from this cause.

ACUTE ENDOCARDITIS

SYNONYMS: Exudative endocarditis; valvulitis.

INFORMATION: Acute endocarditis is an inflammation of the lining membrane of the heart. It is usually confined to the valves and almost invariably follows some of the acute diseases, such as acute articular rheumatism, acute Bright's disease, pleurisy and the infectious diseases, as diphtheria, scarlet fever, pneumonia, etc.

SIGNS AND SYMPTOMS of *acute simple endocarditis* are usually not well marked, there is mild dyspnea, precordial pain, increased pulse rate and some fever. These cases are generally not diagnosed until auscultation shows a slight murmur of the heart.

Acute Ulcerative Endocarditis occurs more often in the course of another disease and shows itself by an increased, irregular temperature, pain over the region of the heart with a rapid and irregular pulse, palpitation, shortness of breath and sometimes nausea and vomiting. Auscultation shows a murmur which is variable in intensity.

DIFFERENTIAL DIAGNOSIS: *Pericarditis* may show swelling in the precordial region with dullness. There is a friction sound between the heart and the pericardium which occurs

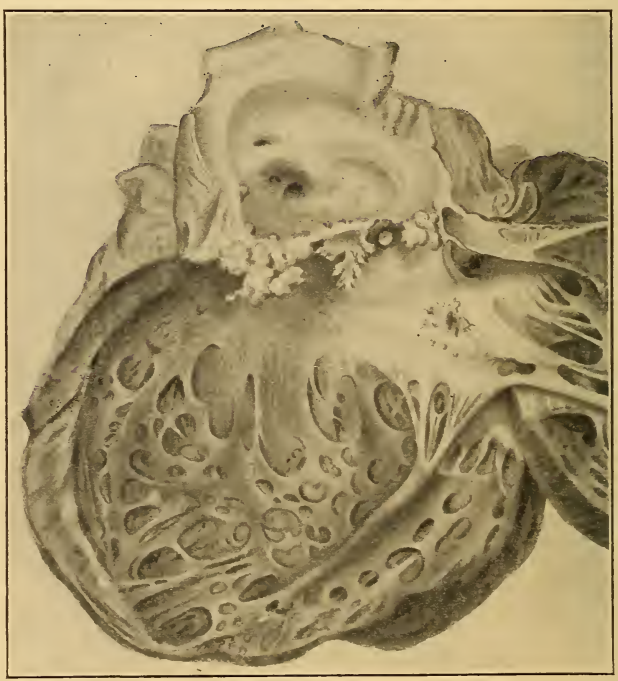


Fig. 97.—Acute ulcerative endocarditis. (American Text-Book of Pathology).

with either cardiac sound and is influenced by pressure, while the murmur in endocarditis is fixed and uninfluenced by pressure and is transmitted in some cases to distant points.

COMPLICATIONS: *Embolism* may follow this disease, when the signs and symptoms will depend on the part of the body affected. If the embolus lodges in the peripheral vessels, a petechial rash may result with pain and tenderness; if in the brain, unconsciousness or paralysis may supervene; if in the kidneys, albuminuria may follow.

HOUSE CONFINEMENT lasts from 1 to 2 or 3 weeks if this disease occurs alone. When it exists as a complication to other diseases, the duration of the primary illness is prolonged from 2 to 3 or 4 weeks according to the severity of the endocarditis.

TOTAL DISABILITY in uncomplicated cases lasts from 2 to 4 weeks; this time depending on the severity of the inflammation and the occupation of the individual. If the duties are inside and can be performed with practically no manual labor, the length of total disability is shorter than if the disease occurred in some one requiring much physical exertion in the performance of the daily labor. When acute endocarditis exists in conjunction with a previous illness, total disability is increased in the average cases from 1 to 3 weeks. If an attack of severe acute articular rheumatism is followed by an inflammation of the lining membranes of the heart and the individual is already greatly debilitated, total disability is prolonged in such and similar cases following other diseases, from 4 to 6 or 8 weeks from the onset of the heart complication.

PARTIAL INDEMNITY FOR TOTAL DISABILITY if payable by the policy after the termination of house confinement may be necessary and lasts from 2 to 4 or 6 weeks; this time, however, depending on the severity of the primary illness and also of the endocarditis.

EFFECTS: Attacks of endocarditis almost invariably leave an impaired heart which is manifested by a murmur of more or less intensity, consequently, such individuals are never insurable for an accident or health policy, and a substandard life policy only can be granted them.

DILITATION OF THE HEART

SYNONYMS: Enlargement of the heart; hypertrophy.

INFORMATION: Dilitation of the heart is an increase in its size, either due to the enlargement without hypertrophy of the muscle or enlargement in which the muscle participates. Dilitation of the heart is seen in conjunction with certain diseases, such as syphilis, chronic bronchitis, rheumatism, gout, chronic valvular disease and Bright's disease. Acute dilitation may result from over exertion, but in such cases almost invariably the heart muscle has been previously diseased and on a sudden straining, acute enlargement without hypertrophy occurs.

SIGNS AND SYMPTOMS: The pulse is rapid, feeble and often irregular or intermittent; there is cough, dyspnea, headache, dizziness and vertigo. On palpation the impulse is marked and diffused, the apex beat is displaced downward and outward and on auscultation, the sounds are weak and are often accompanied by murmurs of varying degrees of intensity. When the dilitation results from over exertion, weakness is an early symptom and usually causes disability at once, while if the condition has been gradually coming on, there is a history of more or less loss of time from labor extending over weeks or months until it finally terminates in disability.

Fig. 98.—Hypertrophy of the left ventricle. (Stengel).

DIFFERENTIAL DIAGNOSIS: *Hypertrophy* is differentiated from dilitation of the heart by the character of the pulse,—strong, regular and full, and by auscultation and percussion which shows the heart enlarged with a strong impulse, the heart sounds being normal in every respect.

Pericardial Effusion appears suddenly, but almost invariably in conjunction with some acute disease. When this condition exists, the heart sounds are feeble on account of being masked by fluid in the pericardial sac. Dullness which is well marked over the distended pericardium is ascertained by percussion; this area is triangular in form with the apex above and the base below. Absence of the apex beat from its usual position is noticed.

COMPLICATIONS: *Dilitation* of the heart may occur as a complication of some acute infectious disease and if such a condition ensues, disability is prolonged according to the character of the previous disease, the physical condition of the individual and the extent of the dilitation.

HOUSE CONFINEMENT in cases of acute dilitation following over-exertion is uncertain, depending on the amount of strain sustained by the heart, the physical condition of the person, the rapidity with which recuperative changes take place and the amount of enlargement present. These cases usually, however, require from 2 to 4 or 6 weeks of house confinement, the greater part of this time being spent in the recumbent position. If this condition follows any acute disease, house confinement is prolonged from 1 to 3 or 4 weeks; this time depending on a number of conditions.

TOTAL DISABILITY follows in cases of acute dilitation of the heart, and in preferred risks lasts from 2 to 3 or 4 weeks. Ordinary risks who are already in poor physical condition, require from 3 to 6 or 8 weeks and sometimes longer before being able to resume a part of the occupation.

PARTIAL INDEMNITY FOR TOTAL DISABILITY if payable by the policy after the termination of house confinement, lasts from 1 to 3 or 4 weeks in preferred risks, and from 2 to 4 or 6 weeks in ordinary ones.

EFFECTS: Individuals with a history of having suffered with dilitation of the heart either from over-exertion or in conjunction with any disease, are not insurable for any kind of a policy unless the condition occurred in early childhood and the heart had become normal by the time adult life was reached. Accident insurance companies usually cancel accident or health policies whenever they receive a claim for disability from dilitation of the heart or secure information that such a condition exists.

LEUCOCYTHEMIA

SYNONYMS: Leucocythemia; leucemia; leukemia; anemia splenica; white blood; white cell blood.

INFORMATION: Leucemia is an impoverished condition of the blood in which there is an enormous increase in the white corpuscles, with enlargement of the liver, spleen and lymphatic glands and change in the bone marrow. The disease is more fre-

quent in middle life, affects males more often than females and is said to be hereditary and in some cases follows pregnancy, syphilis, malaria and traumatism.

SIGNS AND SYMPTOMS: The onset of this disease is gradual and resembles anemia. There may be moderate fever with impairment of vision and later on the liver and spleen become enlarged and hemorrhages occur into the mucous membranes and under the skin, which is pale and waxy in appearance. The blood consists of little coloring matter and a greatly increased number of white blood cells which are of various shapes. The above signs and symptoms usually persist for one to three years, but sometimes the condition is an acute one and the last stages are reached within two to three months.

DIFFERENTIAL DIAGNOSIS: *Anemia* resembles leucemia in the early stages, but the differential diagnosis is easily made when the microscope is used.

COMPLICATIONS: This disease may exist with and complicate tuberculous diseases of the lungs or other parts of the body.

HOUSE CONFINEMENT does not exist in this disease until near the termination, when the individual becomes so weak that confinement to bed is obligatory and in such cases the time is uncertain, sometimes lasting a few weeks only, other times from 2 to 4 or 6 months.

TOTAL DISABILITY does not occur until late in the disease, but begins before house confinement is necessary and persists to the termination of the case. In acute cases, total disability may only last from 1 to 2 or 3 months when a fatal termination ensues. More chronic cases require total disability which lasts a variable time; in some cases from 1 to 2 or 3 months, while in others from 3 to 6 or 9 months may be necessary.

PARTIAL INDEMNITY FOR TOTAL DISABILITY if provided by the policy after the termination of house confinment, is rarely necessary as almost invariably these cases are terminated by death.

EFFECTS: Individuals suffering with this disease are not insurable for any kind of a policy and if the condition is known to an insurance company, the policy would be cancelled at once. Claims arising under this disease in which the policy has not been in force more than three to six months should be closely investigated, as it is almost a foregone conclusion that the con-

dition was present when the policy was taken out, although it might not have been known to the applicant.

ACUTE MYOCARDITIS

SYNONYMS: Carditis; abscess of the heart.

INFORMATION: Acute myocarditis is an acute inflammation of the heart muscle. It follows or complicates acute infectious diseases or results from an attack of endocarditis or pericarditis.

SIGNS AND SYMPTOMS of this disease are very obscure and sometimes the diagnosis is not made until after death. In some cases there is pain, dyspnea, feeble, rapid and irregular pulse; the apex beat and heart sounds are weak and evidence of edema is seen in the later stages.

HOUSE CONFINEMENT in this disease rarely lasts over 2 to 3 or 5 days when death terminates the case. Should this not occur, chronic myocarditis may supervene, when disability is prolonged.

TOTAL DISABILITY is short and seldom lasts over 1 week unless the condition becomes chronic, when this form of disability is uncertain.

PARTIAL INDEMNITY FOR TOTAL DISABILITY if payable by the policy after the termination of house confinement, would be necessary in cases which become chronic.

EFFECTS: Should the individual recover, an impaired risk results and life insurance would not be issued except under a substandard policy. Accident or health insurance might be written one to two years after full recovery has taken place, provided the individual is shown by a medical examination to be an average risk.

CHRONIC MYOCARDITIS

SYNONYMS: Chronic carditis; chronic interstitial myocarditis; fibroid heart; fibrous myocarditis; cardio-sclerosis.

INFORMATION: Chronic myocarditis sometimes results from an attack of myocarditis, but usually this is a chronic inflammation and develops gradually; the heart muscle deteriorating by fatty degeneration or fatty infiltration accompanied by fibroid induration. It is said to be most frequently caused by sclerosis of the coronary arteries; other causes are excessive use

of tobacco or alcohol, syphilis, chronic diseases of the kidneys or other parts of the body. The disease is most common in those past fifty years of age and should not occasion a claim under an accident or health policy,—unless the policy has been in existence several years or more.

SIGNS AND SYMPTOMS are not marked unless an act of over-exertion causes symptoms referable to a weakened heart, when there is shortness of breath, cardiac palpation, irregular, intermittent pulse with headache and faintness. Percussion shows that the heart is somewhat enlarged and on auscultation the sounds are found to be weak and muffled with murmurs and accentuation of the second sound in some cases.

HOUSE CONFINEMENT is not necessary in those suffering from a chronic inflammation of the heart muscle, unless some act of over-exertion causes a temporary period of disability, when the individual may be confined to the house and bed until the organ becomes rested and regains part of its impaired tone. This time does not usually last more than 1 to 2 weeks.

TOTAL DISABILITY is not present in those suffering with chronic myocarditis until house confinement is made necessary on account of some indiscretion, when this form of disability lasts from 1 to 2 or 3 weeks; at the end of which time the individual is generally able to resume the duties of his occupation.

PARTIAL INDEMNITY FOR TOTAL DISABILITY if payable by the policy after the termination of house confinement, is sometimes necessary in these cases, but usually not more than 1 week is demanded.

EFFECTS: Individuals suffering with this disease are not insurable for any kind of a policy if the condition is known. In some cases it is impossible to tell by a medical examination that such a condition exists and this is especially true when the individual endeavors to withhold all information. Those suffering with this disease are extremely poor risks for accident insurance, for the reason that a sudden death is liable to occur at any moment, and if this should happen while the policy holder was in front of a vehicle of any description and was run down, a claim for an accidental death would be the result and could not be disproved without a postmortem examination, which of course the insurance company could demand and secure. Even though a death under such circumstances was entirely due to the condition of the heart, an insurance company would have more or less trouble in disproving the claim.

PERICARDITIS

SYNONYMS: Acute pericarditis; chronic pericarditis; adhesive pericarditis.

INFORMATION: Pericarditis begins as an acute inflammation of the pericardium and when recovery does not follow within a reasonable time, chronic pericarditis results. This inflammation follows or is combined with rheumatism, gout, septi-

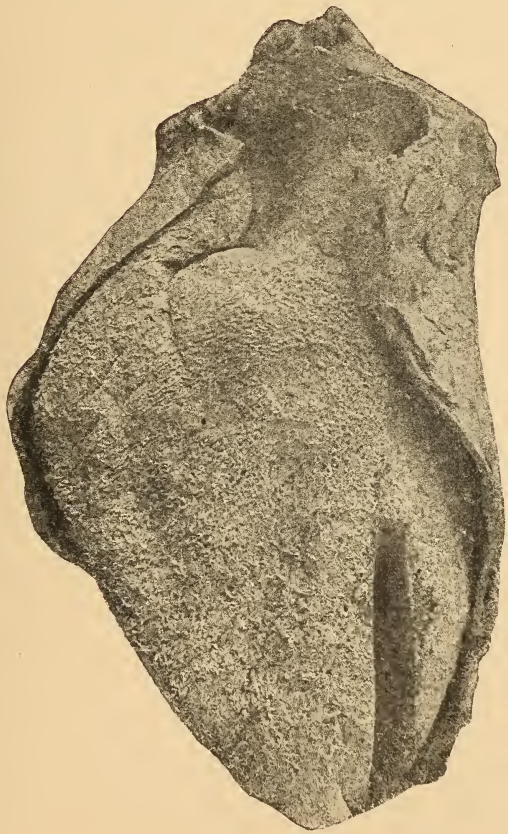


Fig. 99.—Acute pericarditis. (Bramwell).

cemia, tuberculosis, scarlet fever, smallpox, diabetes or Bright's disease and rarely is due to exposure or injury.

SIGNS AND SYMPTOMS: An attack of this disease often comes on insidiously when a long illness is causing disability and unless for some reason, some special signs or symptoms call attention to the heart, the onset is not noticed. Acute pericarditis

usually begins with nausea, vomiting, chills, pain over the region of the heart which is increased by pressure, cough without expectoration, increased pulse and irregular fever. In the early stages there is a dry friction rub which can be heard by auscultation and is often perceptible by palpation. Later as effusion occurs and percussion outlines the pericardial sac with the base below and near the sixth or seventh rib and the apex above at the second rib. As resolution takes place, absorption of the fluid occurs and the dullness in the pericardial region gradually becomes normal in shape, the friction sound returns and in time disappears.

DIFFERENTIAL DIAGNOSIS: *Acute Endocarditis* may be mistaken for this affection, but in this form of inflammation there are endocardial murmurs associated with the sounds of the heart and best heard over the location of the valves. The friction sound which occurs in pericarditis and is loudest at the base of the heart, is not heard in cases of endocarditis. Effusion does not occur in this disease and is almost invariably present in pericarditis. The outline of the heart dullness is not altered in endocarditis, while in pericarditis it takes the shape of a triangle, with the base below and apex above.

Hypertrophy of the Heart is generally seen in athletes and those whose work requires extreme exertion. In this condition, the position of the apex beat is displaced downward and it is forcible, while the heart sounds are strong and unimpaired and the area of dullness is unaltered in shape, although slightly increased in size.

Dilitation of the Heart is seen in individuals who have suffered from over-exertion or from some disease which has caused prolonged disability. In this condition the pulse is weak, the apex beat is displaced downward and outward and is diffuse and not well marked. The area of dullness is unchanged, except that it is enlarged, while in pericarditis, dullness is due to the fluid surrounding the heart and is pryamidale in shape.

HOUSE CONFINEMENT: As pericarditis usually follows or complicates a preceding disease, the duration of the illness causing disability is increased from 1 to 3 weeks and sometimes longer; this time depending on the physical condition of the patient at the onset of this inflammation and the severity of it. When this disease follows as a complication and is severe, death may occur within 3 to 7 or 10 days after the beginning of the complication.

TOTAL DISABILITY of the original disease is usually prolonged by this complication from 2 to 4 weeks. When the individual has become greatly debilitated by the preceding illness, total disability may be increased from 4 to 6 or even 8 weeks. Cases which terminate fatally usually do so within a short time after the pericarditis supervenes and disability is thereby shortened. Total disability from primary attacks of acute pericarditis lasts from 2 to 3 or 4 weeks.

PARTIAL INDEMNITY FOR TOTAL DISABILITY after house confinement has ended is allowable if provided by the policy and is usually short, from 1 to 2 or 3 weeks being sufficient in the majority of cases.

EFFECTS: Individuals having suffered with an attack of pericarditis are seldom insurable until at least six to twelve months have elapsed after complete recovery has ensued, when all forms of insurance could be granted after a medical examination has been made and the report found satisfactory.

PHLEBITIS

SYNONYM: Inflammation of a vein.

INFORMATION: Phlebitis is an inflammation of a vein or collection of veins and may be due to rheumatism, gout or tuberculosis, or follow typhoid fever or other infectious diseases. It is occasionally the result of an injury to the vein itself or from extension of inflammation which has been primarily caused by a wound. This inflammation more often involves the veins of the lower extremity. Varicose veins are prone to suffer from an inflammation due to injury or one of the above causes.

SIGNS AND SYMPTOMS: Phlebitis in a superficial vein results in a cord-like swelling, with pain and tenderness over the part of the vein inflamed and a dusky red discoloration of the skin. When the inflammation involves the deeper veins there is no change in the color of the skin, but pain is present and becomes severe on pressure, nodular, deep seated induration is palpable and swelling of the extremity is present below the point of inflammation. If the phlebitis is accidental in origin, evidence of an abrasion, laceration or contusion is apparent.

DIFFERENTIAL DIAGNOSIS between phlebitis following an accidental injury and that due to some internal condition is important. If the individual carries an accident policy and this inflammation ensues, it must be caused by an accident for dis-

ability to be payable by the policy and unless external evidence of an injury is present or has existed, the inflammation is not likely to be accidental in origin. If a disability or general health policy is carried, indemnity is payable whether disability is due to an accident or the result of disease commencing within the circulatory system.

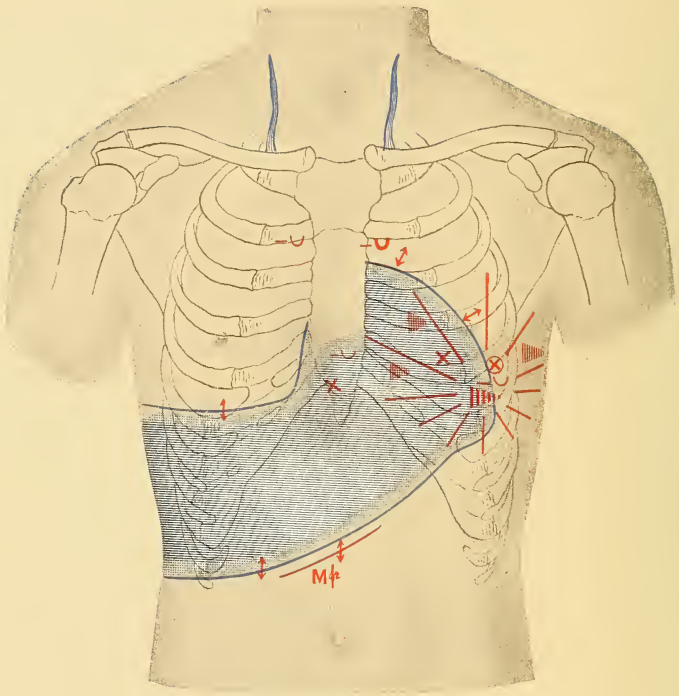
HOUSE CONFINEMENT depends on the cause and loca-

Fig. 100.—Varicose veins. (International Text-Book of Surgery).

tion of the inflammation. If phlebitis involves the upper extremities or the head, from 5 to 10 days are usually sufficient. Should the inflammation be situated in the veins of the lower limbs, from 1 to 3 or 4 weeks of house confinement may be necessary before the individual has sufficiently recovered to resume part of the oc-

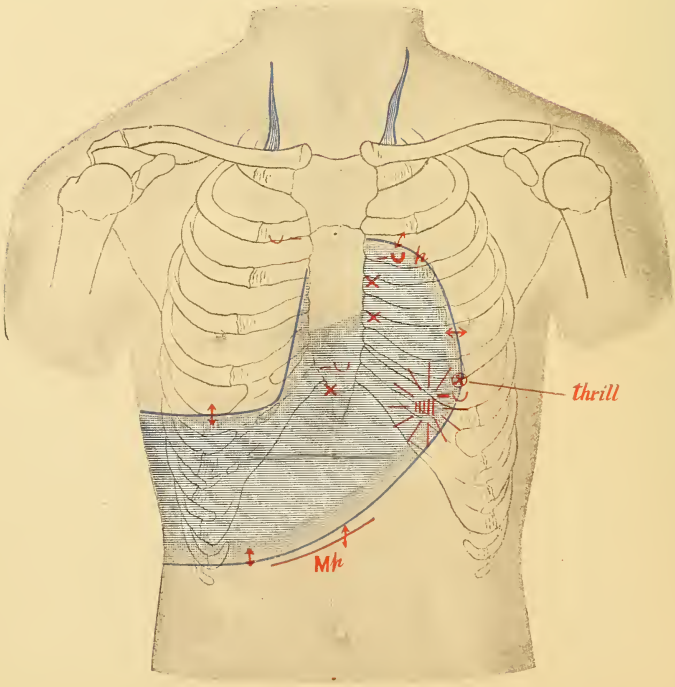
PLATE IV

FIG. 1



Mitral Regurgitation.

FIG. 2



Mitral Stenosis.

(Musser)

cupation. When an operation is necessary for phlebitis involving the extremities, house confinement is increased from 2 to 3 weeks from the date of operation. Should the phlebitis involve some of the veins of the skull, an operation is usually imperative; in which case house confinement lasts from 3 to 6 or 8 weeks after the date of operation.

TOTAL DISABILITY depends on the location of the inflammation and lasts from 1 to 2 or 3 weeks longer than house confinement; this time depending on whether an operation has been performed; if not, total disability practically ends at the termination of house confinement, but if an operation has been necessary the above time may be required after house confinement has ended.

PARTIAL INDEMNITY FOR TOTAL DISABILITY if payable by the policy after the termination of house confinement is short, seldom lasting more than from 1 to 2 or 3 weeks, according to the conditions described under total disability.

EFFECTS: Individuals having suffered from an attack of phlebitis which was not suppurative, whether due to an accident or disease, are insurable for all kinds of insurance from three to six months after complete recovery. Should suppurative phlebitis be suffered, such a condition is liable to recur, when a health policy would not be issued without a waiver eliminating indemnity for disability from this disease. In such cases, life insurance would not be considered until at least one year after the date of recovery and it would be necessary that the medical examination show an average risk.

VALVULAR DISEASES OF THE HEART

SYNONYMS: Chronic valvular disease; chronic endocarditis; sclerotic endocarditis; interstitial endocarditis.

INFORMATION: Chronic endocarditis follows acute disease of the endocardium and results in an impairment of the valves of the heart causing an improper closure of the orifices through which the blood passes. This produces murmurs whose point of greatest intensity marks the situation of the valve affected. This impairment of the valves of the heart follows acute diseases and is most common after attacks of acute articular rheumatism which occur in childhood or early adult life. The acute infectious diseases, such as scarlet fever, diphtheria, la grippe, etc., and chronic diseases, as syphilis, gout and Bright's

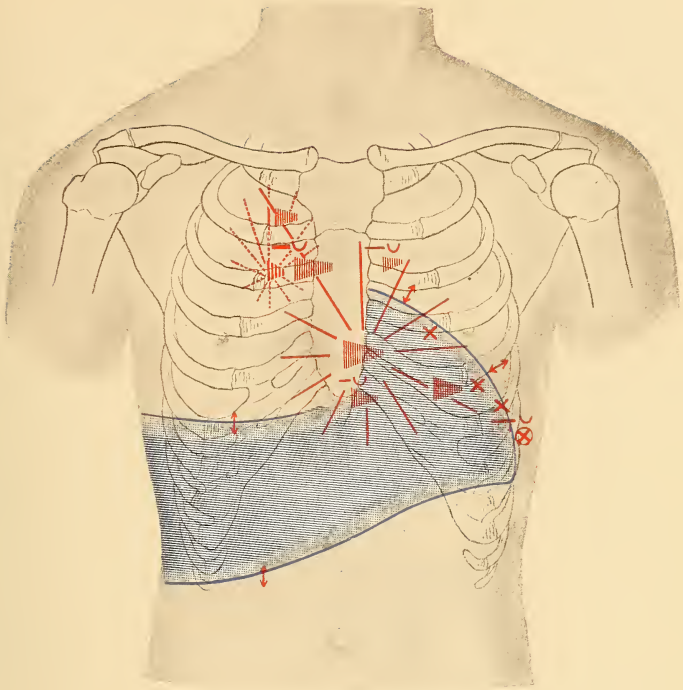
disease are also exciting causes. Excessive overwork in early life or a sudden strain put upon the heart by lifting or attempting to perform a feat of strength are also said to result in valvular diseases. When disability is caused by valvular disease of the heart, it is almost invariably true that the impairment has been existing for months or years before the disability exists, unless there is a clear history of an act of over-exertion which might cause such a strain that would result in a heart murmur The usual history, however, of these cases is that the valvular disease has been existing for a long time and disability results as a gradual weakening of the heart occurs, either from excessive every day work or some acute disease

SIGNS AND SYMPTOMS depend on the location of the diseased valve. The most common form of chronic endocarditis is mitral regurgitation which is characterized by a systolic murmur at the apex of the heart and this murmur is generally transmitted to the axilla. Next in frequency is aortic regurgitation resulting in a greatly enlarged heart and a diastolic murmur which is best heard over the second right intercostal space and transmitted down the side of the sternum towards the apex. This is the one form of chronic valvular disease that most commonly results in sudden death. Aortic obstruction is characterized by a systolic murmur which is best heard at the second right intercostal space and is transmitted into the great vessels of the neck. Mitral stenosis is frequently associated with mitral regurgitation and results from an obstruction to the blood current as it passes through the mitral orifice. This form of valvular disease presents a pre-systolic murmur with its point of greatest intensity in the mitral area. Other murmurs are also heard in connection with the valves of the heart, but the above are the most frequent ones. In all cases of valvular disease, shortness of breath on exertion, pain over the region of the heart, dry cough and a characteristic pulse are present.

DIFFERENTIAL DIAGNOSIS is unimportant as regards the issuance of an insurance policy, for the reason that no company would insure an individual under an accident or health policy, if it was known that any form of valvular heart disease was existing. Life insurance can be secured for those with impaired hearts only under the substandard form. When disability results under a health or general disability policy, individuals who suffer from aortic regurgitation are usually longer disabled than those suffering from the other forms.

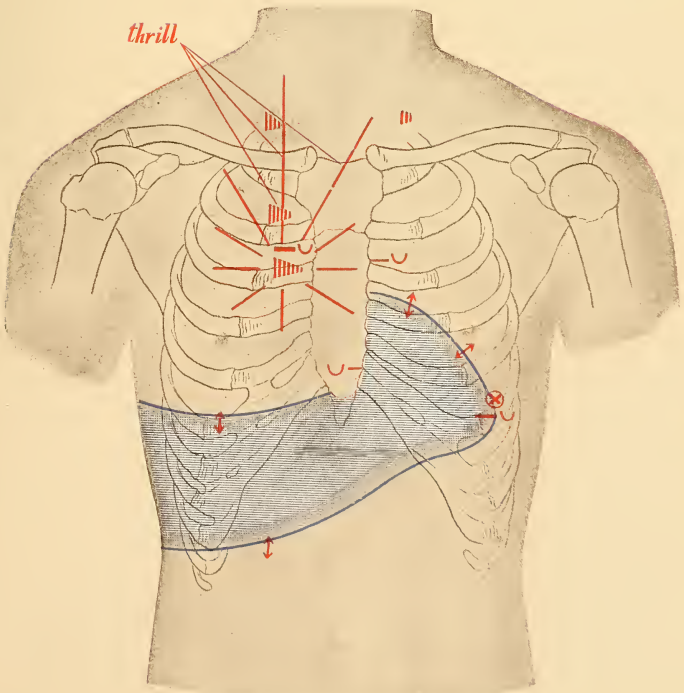
PLATE V

FIG. 1



Aortic Regurgitation.

FIG. 2



Aortic Obstruction.

(Musser)

HOUSE CONFINEMENT when due to valvular disease of the heart alone, does not ensue until that organ becomes so weak from the daily labor or an act of over-exertion, that the inindivual is required to rest, when from 1 to 2 or 3 weeks in bed are usually sufficient for the heart to regain some of its strength and permit the occupation to be resumed. When the above time is lengthened, the physical condition of the individual is so poor that rest in bed of from 2 to 4 or 6 weeks is sometimes necessary before the heart regains some of its former tone.

TOTAL DISABILITY depends on the age of the individual, the exact duties of the occupation and the form of valvular disease present. Preferred risks of middle age are usually not totally disabled longer than house confinement—from 1 to 2 or 3 weeks. When the age is past fifty years and a sudden strain has taken place, death may ensue or total disability last from 2 to 4 weeks or more. Ordinary risks are totally disabled from 3 to 6 or 8 weeks, when disability results from chronic valvular disease of the heart which has been brought on by excessive daily work or an act of over-exertion.

PARTIAL INDEMNITY FOR TOTAL DISABILITY when the policy requires house confinement and this form of indemnity is payable, is usually short in preferred risks, not more than 1 to 2 weeks. Ordinary risks generally require from 2 to 4 weeks of this form of disability after the termination of house confinement.

EFFECTS: Individuals suffering from any form of valvular disease of the heart are not insurable for accident or health insurance and when an insurance company learns that a policyholder is suffering with such a disease or condition, the policy is cancelled at once. Life insurance can generally be secured by such persons under a substandard policy.

PLATE VI

FIG. 1.—Anterior Aspect.

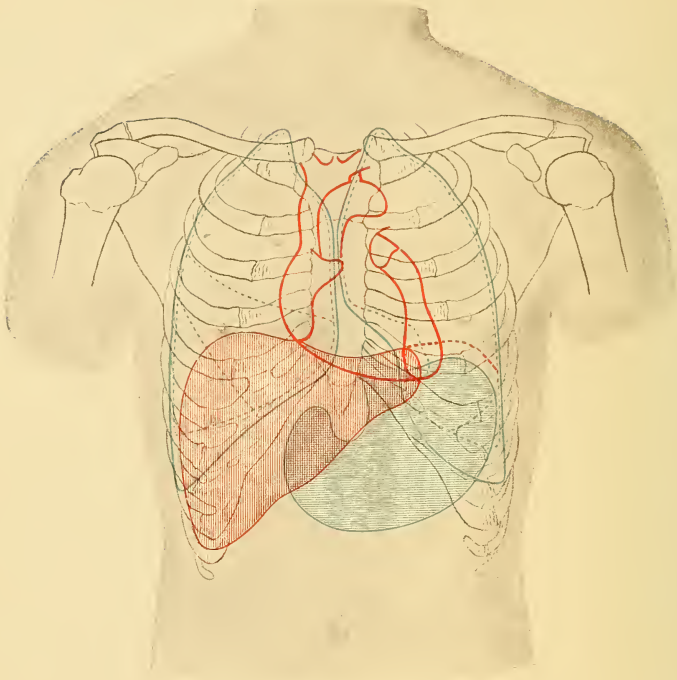
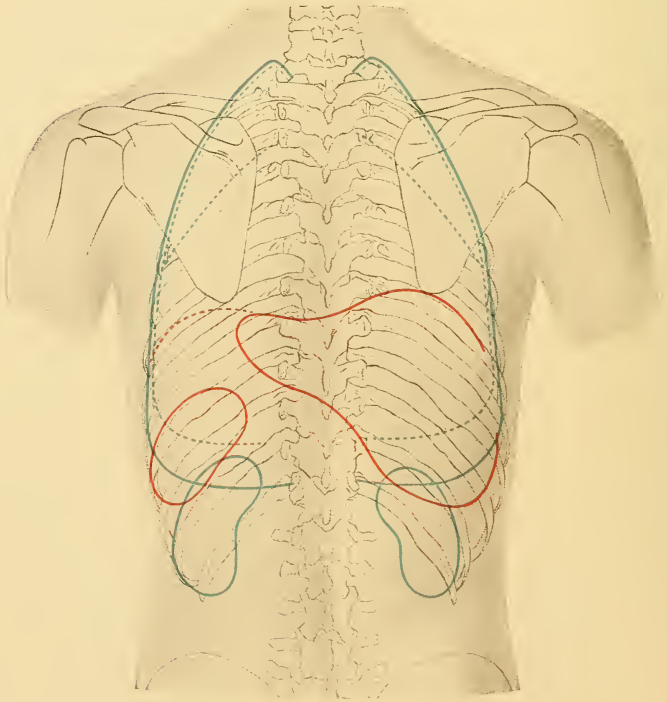


FIG. 2.—Posterior Aspect.



Situation of the Viscera.

Outlines of heart and vessels—broad red lines. Margins of lungs and individual lobes—dotted green lines. Limits of pleural sacs—solid green lines. Liver—red shading. Stomach—green shading.

(In part after His-Spalteholz and Luschka.) (Musser.)

CHAPTER XV

DISEASES OF THE LUNGS AND RESPIRATORY SYSTEM

ABSCESS OF THE LUNG

SYNONYM: Circumscribed suppuration of the lung.

INFORMATION: The most common form of abscess of the lung is that due to the bacillus of tuberculosis, but as such abscesses are usually multiple, they are not considered in this article. A circumscribed abscess of the lung is generally caused by streptococci or staphylococci and results from the extension of a suppurative inflammation in a neighboring part, such as the pleura or liver, from foreign bodies drawn into the lung or when these germs are transferred to an impaired part of the lung by the blood current. Wounds of the lung resulting from puncture by a foreign body or a puncture due to the fractured end of a rib, sometimes produce an abscess and in rare instances croupous pneumonia ends in this manner.

SIGNS AND SYMPTOMS: Chills, high and irregular fever followed by profuse sweating indicates the formation of an abscess in this part of the body. There is dyspnea, cough with infrequent, but profuse expectoration of offensive pus and shreds of lung tissue. On percussion, over the location of an abscess cavity and before it is emptied by a fit of coughing, dullness is elicited but after a coughing spell and expectoration, the cavity becomes filled with air when hyper-resonance exists. Large abscesses of the lungs can often be diagnosed by the x-rays and by a count of the leukocytes which are greatly increased in number under these circumstances.

COMPLICATIONS: *Gangrene of the Lung* sometimes complicates or results from an abscess, when the signs and symptoms are practically the same with the exception that the breath is very foul and the odor of the expectorated matter is extremely offensive. Cases of gangrene are generally accompanied by an uncontrollable diarrhea which produces, together with the lung condition, much exhaustion. Pulmonary hemorrhages sometimes occur in this condition.

HOUSE CONFINEMENT: When an abscess of the lung follows as a complication to some other disease, house confinement of the primary illness is generally prolonged from 2 to 3 weeks when no operation is performed; if this is done, house confinement is increased from 4 to 6 or 8 weeks. An abscess of the lung resulting from an external injury does not show marked signs or symptoms until from one to two weeks after the accident occurred, when house confinement may or may not be required; if so, from 1 to 3 weeks are generally sufficient. House confinement is usually prolonged from 4 to 6 weeks from the date of operation when this procedure becomes necessary. Some cases of abscess of the lung produce death within a short time and if this occurs, house confinement does not often last longer than 1 to 2 weeks.

TOTAL DISABILITY is most uncertain in individuals suffering from an abscess in this location. When suppuration follows an acute disease, the physical condition is already below par and total disability is greatly prolonged if death does not ensue. In such cases from 2 to 3 or 4 months of disability are not unusual and sometimes these cases run longer than the limit of the policy. Total disability following an abscess of the lung resulting from an external injury or the drawing into the lungs of some foreign body, lasts from 4 to 6 or 10 weeks from the beginning of disability, this time including house confinement. An operation always prolongs disability lasting from 4 to 6 or 8 weeks.

PARTIAL INDEMNITY FOR TOTAL DISABILITY if payable by the policy is uncertain and depends on the location and size of the abscess, together with the physical condition and the method of treatment.

EFFECTS: When an abscess of the lung results from an injury and recovery is complete, insurance of all kinds can be issued one year after the date of recovery. Individuals having suffered from an abscess due to some other cause in which disability has been greatly prolonged are rarely insurable for any kind of a policy; certainly not until five to ten years have elapsed from the termination of the abscess and during which period no signs or symptoms occur which are referable to it.

ASTHMA

SYNONYMS: Bronchial asthma; essential asthma; spasmodic asthma; nervous asthma.

INFORMATION: Asthma is described as a "true neurosis of the respiratory apparatus" (Hughes) which results in a probable spasmodic contraction of the muscular layer surrounding the small bronchial tubes. It is more common in men than in women, occurs at any age and is more frequent in winter than in summer. The attack may last several hours, days or weeks and is usually excited by atmospheric changes, the inhalation of dust or odors of different kinds or a reflex irritation from the nasal chambers.

SIGNS AND SYMPTOMS: An attack of asthma usually appears suddenly, although sometimes prodromes, such as a feel-

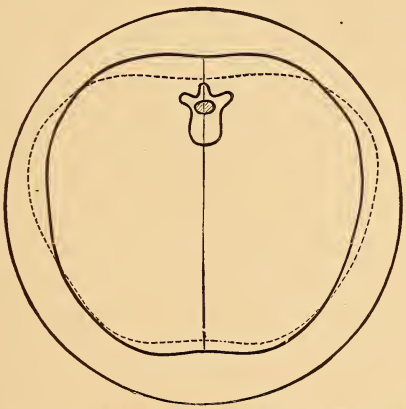


Fig. 101.—Bilateral eniargement of emphysema.

Inner line—emphysematous chest.
Outer line—a circle drawn to show how nearly the emphysematous approaches the circular shape.
Dotted line—normal adult chest.

Actual measurement in centimetres.

Circumference—natural,	89.0	emphysematous,	87.75	
Transverse— "	29.6	"	27.25	
Anteroposterior— "	22.25	"	25.4	(Gee).

ing of constriction surrounding the chest, sneezing, flatulency, coryza or a discharge of pale urine precedes the seizure. The paroxysms of this disease most frequently occur in the early morning hours when the individual is awakened on account of not being able to breathe. This condition produces a flushed face, profuse perspiration, protrusion of the eyeballs, loud wheezing and great muscular inspiratory and expiratory efforts. Dyspnea sometimes becomes so severe that respiration almost ceases, and as this disappears, cough with expectoration occurs. The expectoration contains delicate spirals of mucus (Curschmann's spirals) and octahedral crystals (Charcot-Leyden crystals). The

paroxysms of asthma may last from a few minutes to several hours and in some cases daily attacks are suffered; these persisting for several weeks or more. Asthmatics are unable to expel the air from the lungs on account of the absence or degeneration of the elastic fibers surrounding the bronchioles and this results in dilitation of the lungs. This condition is recognized by hyperresonance on percussion, and on auscultation absence of the inspiratory murmur with prolonged expiration and numerous moist rales heard over both lungs.

DIFFERENTIAL DIAGNOSIS: *Hay Asthma* occurs in May or June as a rose cold or in the autumn as an autumnal catarrh The time of the occurrence of this disease, together with the sneezing and watery discharge from the nose and eyes which persists for days and does not occur in spasmodic attacks, marks the difference between an attack of this and true asthma.

Cardiac or Renal Asthma is a name applied to forms of dyspnea which are produced by diseases of the heart or kidneys, and in such cases there is evidence of organic disease of these organs.

Dyspnea due to diseases of the larynx or obstruction from foreign bodies, must be differentiated from dyspnea caused by asthma. Difficulty in breathing when caused by some form of obstruction in the larynx or bronchial tubes is not due to the individual being unable to expel the air which is in the lungs, but is caused by a condition which prevents ingress of the air and if death occurs, it results from suffocation

SEQUELAE: *Emphysema* of the lungs invariably results from repeated attacks of asthma and this condition becomes so pronounced that the form of the chest is altered, but disability is not caused by this sequelæ.

Dilitation of the Right Ventricle follows attacks of asthma and is due to this disease and also to the emphysema which results from frequent attacks. As with emphysema, disability is not caused by this condition, but it may be prolonged in attacks of asthma when this complication is present.

HOUSE CONFINEMENT: Attacks of asthma do not often require more than 1 to 2 days of house confinement, unless the paroxysms are repeated at short intervals or every day for several days or more, when house confinement of 1 to 2 weeks is not unusual. When asthma occurs during cold weather, house confinement may last from 2 to 3 or 4 weeks.

TOTAL DISABILITY is never longer than from 1 to 2 or 3 days in individuals suffering from an attack of asthma for the

first time, but as the paroxysms become more frequent the length of total disability is increased, but even under these conditions it is seldom over 1 week. When the attacks occur daily or nearly every day and last from one to two weeks or more, total disability of from 1 to 3 or 4 weeks is often necessary. This is especially true when asthma occurs during the winter months and is due to exhaustion following repeated paroxysms.

PARTIAL INDEMNITY FOR TOTAL DISABILITY if payable by the policy after the termination of house confinement, does not often require more than 1 to 2 weeks, as any one suffering from this disease is generally sufficiently recovered to resume the occupation a short time after the last attack.

EFFECTS: An individual having suffered with one or more attacks of asthma is an impaired risk. Life insurance can sometimes be secured under the substandard form; while accident insurance can be written if all the other conditions are favorable. Health or disability insurance would hardly be given such a person even though a waiver be placed on the policy eliminating indemnity for disability resulting from any disease or affection of the lungs Individuals with a history of having suffered from asthma during childhood in which little impairment has occurred, are insurable for all kinds of insurance when adult life is reached —if no evidence of the disease is present and no attack has occurred for ten years or more.

HAY ASTHMA

SYNONYMS: Hay fever; autumnal catarrh; rose fever; rose cold.

INFORMATION: Hay asthma is an acute catarrhal inflammation of the air passages, extending from the nose to the bronchial tubes and is caused by an irritation of the nasal mucous membrane by various odors, dust or vapors. It is limited to certain seasons in the year; rose fever beginning in May or June and ending in July; while autumnal catarrh begins in August and ends with the first frost.

SIGNS AND SYMPTOMS: An attack begins with redness and swelling of the eyes followed by a watery discharge. There is sneezing, with an increased flow of mucus from the nose, cough and difficulty in breathing.

COMPLICATIONS: *Pneumonia* sometimes follows or complicates a severe attack of hay asthma, and in such cases disability

persists during the time required by the complication for recovery.

Capillary Bronchitis may follow an attack of hay asthma and result in disability. For other information concerning this complication, see article on Acute Bronchitis.

Edema of the Lungs may ensue as a complication in cases of this disease in individuals greatly debilitated and also when the inflammation extends into the lungs. In such cases, disability results and death usually terminates the case within a short time after the onset of the complication.

HOUSE CONFINEMENT: None for hay asthma, but complications almost invariably cause house confinement and this time is described under the complication.

TOTAL DISABILITY seldom occurs in attacks of this illness at the present day, for the reason that medical treatment can control the signs and symptoms sufficiently to permit the individual to practically attend to all the duties of the occupation. This disease produces inconvenience, but seldom disability of more than from 1 to 2 or 3 days and this length of time is not covered by the majority of health or general disability policies, although some companies pay total disability of one or more days when caused by illness. Sometimes a change of climate is thought necessary, but in such cases an insurance company would hesitate to pay total disability while an individual was away from his business for this reason. Hay asthma almost invariably has a history of previous attacks, therefore, unless the application for insurance stated this history, the company would not be liable for disability resulting from it, as no company would accept such a risk if a history of this disease was known—without a waiver eliminating indemnity for disability resulting from it.

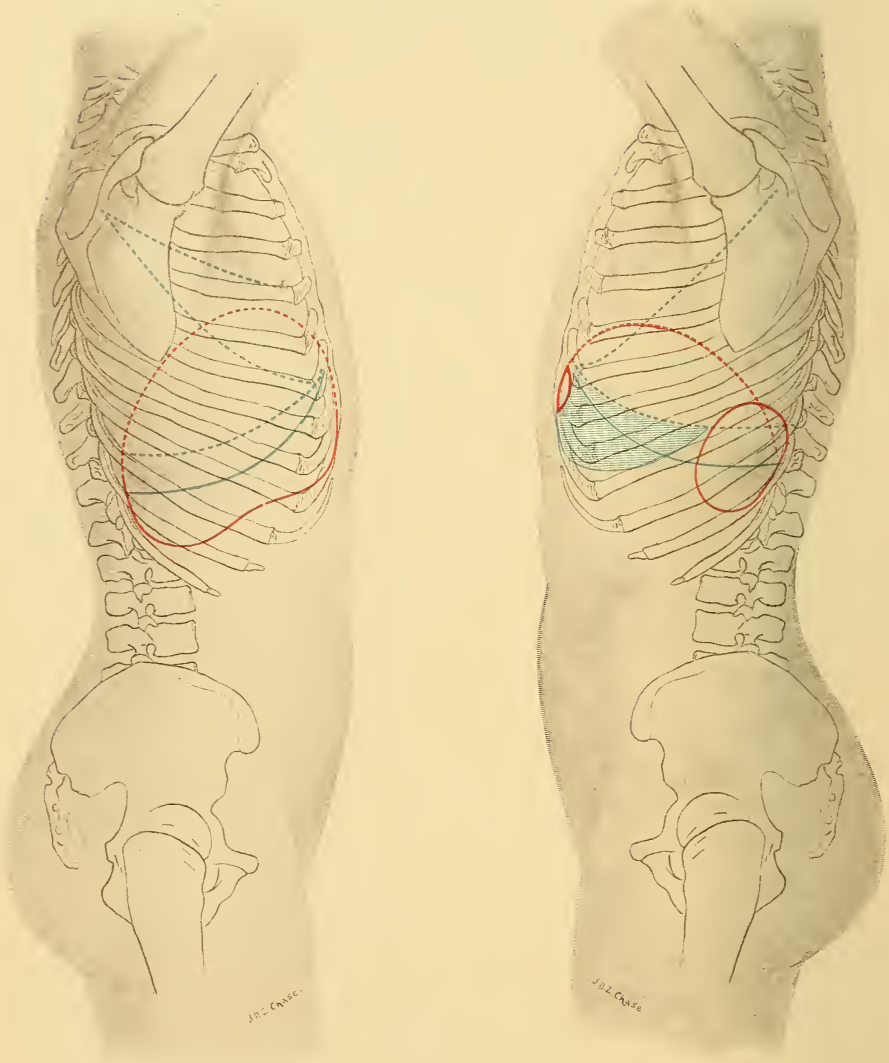
PARTIAL INDEMNITY FOR TOTAL DISABILITY: This form of indemnity is not payable to any class of risks after an attack of hay asthma.

EFFECTS: This disease does not affect the insurability of an individual for accident insurance, but a health policy should contain a waiver eliminating indemnity for disability resulting from it. If the attacks occur regularly every year, are very severe and prolonged, the issuance of life insurance would be questionable.

PLATE VII

FIG. 1.—Right Lateral Aspect.

FIG. 2.—Left Lateral Aspect



Situation of the Viscera.

Margins of lungs and of individual lobes—dotted green lines. Limits of pleural sacs—solid green lines. Liver and spleen—solid red lines. Diaphragm—dotted red lines. Stomach (portion not covered by lung)—green shading.

(In part after Luschka.) (Musser.)

ACUTE BRONCHITIS

SYNONYMS: Bronchitis; acute catarrhal bronchitis; bronchial catarrh; acute bronchial catarrh; cold on the chest.

INFORMATION: Acute bronchitis is a catarrhal inflammation of the bronchial tubes of the lungs and invariably is bilateral. It is more common in a cold damp climate with changeable weather and in occupations in which there is confinement or much dust or irritating vapor constantly in the air. An attack results from exposure when the body is overheated and sometimes it follows some of the infectious diseases. The old form of limited health policies included bronchitis as one of the diseases for which indemnity was payable, but on account of this disease complicating so many other diseases which were not enumerated in the policy and for which indemnity was not payable, it was necessary to eliminate it, as attending physicians invariably gave bronchitis as the cause of disability—if it was present—whether as a complication or the primary disease.

SIGNS AND SYMPTOMS: Acute bronchitis generally begins by a nasal cold which is accompanied by chilliness, vague pains throughout the body and lack of energy. This persists for one to two days when the cold seems to center in the chest producing a cough with little expectoration, fever from 100° to 102° F, with a sense of constriction over the chest and pain behind the sternum which is increased by deep breathing, sneezing or coughing. As the inflammation progresses, expectoration increases and finally a greenish-yellow, profuse, mucous discharge results. On auscultation in the earlier stages, there is harsh breathing over both lungs and later on this persists, but is accompanied by moist, mucous rales.

DIFFERENTIAL DIAGNOSIS: *Croupous Pneumonia* is diagnosed from acute bronchitis by the more sudden onset, increased severity of the symptoms, dullness on percussion, this usually being unilateral and the progress of the disease.

Catarrhal Pneumonia is sometimes mistaken for acute bronchitis, but in this disease there is a gradual elevation of temperature until 102° and 103° F are reached and this is accompanied with cyanosis, rapid, shallow and laborious breathing, frequent pulse, dry, hacking cough, prostration and physical signs indicating consolidation of certain sections of the lungs.

Acute Miliary Tuberculosis sometimes closely resembles acute bronchitis, but in the former there are more marked systemic

symptoms with a high temperature persisting for weeks, increased number of respirations and tubercule bacilli in the sputum.

Influenza is almost invariably accompanied by more or less inflammation of the bronchial tubes. In this disease there is marked prostration with severe pains in the head, back and limbs, high fever and rapid pulse. Insurance companies pay more fraudulent claims under limited health policies which pay indemnity for bronchitis, when the disability is due to influenza, than all other fraudulent claims combined. It is a regrettable fact, but nevertheless true, that physicians will certify that bronchitis is the cause of disability in the majority of cases when this inflammation is present as a complication of la grippe and is not the primary illness.

COMPLICATIONS: *Pneumonia* may follow an attack of bronchitis when the usual signs and symptoms characteristic of this disease become apparent. If this complication arises, disability is prolonged according to the time described under Croupous Pneumonia.

Pleurisy sometimes supervenes during an attack of bronchitis when unnecessary exposure has been suffered. In these cases, the complication is easily diagnosed by the sharp, lancinating pain in the side which is increased by deep breathing or coughing and the physical signs of a friction sound over the spot of inflammation. Disability is prolonged when this complication arises according to the time required for this localized inflammation to disappear.

Acute Tuberculosis of the Lungs may develop after an attack of acute bronchitis which apparently does not result in recovery. It is most likely, however, that the tuberculosis has already been exisiting and when the attack of acute bronchitis occurs, the tuberculous infection is aggravated and the signs and symptoms become sufficiently marked to be noticed after an attack of bronchitis.

HOUSE CONFINEMENT lasts from 7 to 10 days in the average case in all classes of risks. When the disease occurs in the winter months and the termination is during cold, damp and wet weather, house confinement is increased from 1 to 3 or 5 days on account of this outside condition. Severe cases of acute bronchitis require from 2 to 3 or 4 weeks of house confinement and those in which the disease becomes subacute, from 4 to 6 weeks in the house are necessary.

TOTAL DISABILITY in the majority of cases lasts from 10 to 20 days, the average time, however, being 2 weeks. This may be increased or diminished according to the season of the year and the weather condition. If in winter and during inclement weather, it is generally increased 1 to 2 weeks; while if the disease occurs during the summer months, total disability is short, not often over 7 to 10 days.

PARTIAL INDEMNITY FOR TOTAL DISABILITY if payable by the policy after the termination of house confinement, should not require more than from 3 to 7 days. Individuals who have suffered an attack of bronchitis are seldom totally disabled but a few days after house confinement has ended; consequently, this form of disability is not often considered in a settlement.

EFFECTS: An ordinary attack of acute bronchitis that is terminated by a good recovery has no bearing on the insurability of an individual for insurance of any kind. Life insurance, however, would not be written on such a risk when there has been a history of repeated attacks, until at least two to three years have passed without any symptoms referable to this disease, when if a medical examination shows the lungs normal, this form of insurance could be safely granted. Individuals suffering an attack of bronchitis in the fall are not insurable for a health policy until after the following spring, unless a waiver is placed on the policy eliminating indemnity for diseases of the lungs. Accident insurance can be written on such a person as soon as complete recovery ensues.

ACUTE NASAL CATARRH

SYNONYMS: Acute coryza; acute rhinitis; cold in the head.

INFORMATION: Rhinitis is an acute catarrhal inflammation of the mucous membrane lining the nasal cavities and is most frequently caused by exposure, but sometimes results from the inhalation of irritating vapors, gases and dust. It also occurs in conjunction with certain epidemic diseases, such as measles and influenza.

SIGNS AND SYMPTOMS: A cold begins with chilliness, sneezing, running of the nose, headache and a general feeling of malaise. This is soon followed by slight fever, increased discharge from the nose which in time becomes muco-purulent, loss

of appetite and constipation. The mucous membrane lining the nares becomes inflamed and swollen, preventing a free movement of the air through the nose and causing much inconvenience in breathing. In some individuals, a cold extends down and involves the bronchial tubes, when the signs and symptoms of bronchitis which are more or less marked are evident.

DIFFERENTIAL DIAGNOSIS: *Measles* begin with a catarrhal condition of the nose and throat and may be thought in the beginning to be only an ordinary cold, but in this disease the temperature rises rapidly to 103° or 104° F. The second day the temperature declines some and does not rise again until the third or fourth day, when the characteristic eruption appears and marks the disease as something more than an acute coryza.

COMPLICATIONS: *A Mild Conjunctivitis* sometimes accompanies and complicates a severe cold of the head, when total disability if not present on account of the cold, results from the eye conditions and lasts according to the time described under this subject.

Pharyngitis and Laryngitis result from an extension downward of the inflammation which involves the posterior nares, causing pain and difficulty in swallowing and more or less loss of the voice. Inflammation involving the larynx and pharynx are common complications of colds but usually they do not produce or prolong disability, unless the individual is one whose occupation requires constant use of the voice, such as ministers, actors and public lecturers, when total disability is increased by the complication and the length of time is described under Acute Laryngitis.

Acute Abscess of the Middle Ear may result from an inflammation of the Eustachian tube which follows a severe cold of the head. When this complication arises, disability is prolonged and is described under Abscess of the Middle Ear.

HOUSE CONFINEMENT: Acute colds in individuals who are in good health, seldom produce any house confinement. When the cold is exceedingly severe, house confinement of 3 to 7 days may be necessary, and this is sometimes prolonged from 1 to 2 or 3 days when a cold ends during damp, wet weather. If any of the complications arise, house confinement is prolonged according to the time required for recovery of the complication.

TOTAL DISABILITY is not allowable for this condition unless house confinement has ensued, when the length of time for which indemnity is payable is the time covered by house confine-

ment and that time is rarely over 1 week. The majority of health policies do not pay for disability resulting from a cold, on account of requiring at least one week of total disability before any indemnity is payable. Some companies, however, will pay indemnity for total disability when the time is less than seven days, and in such cases the individual is entitled to total disability for the time that house confinement lasted.

PARTIAL INDEMNITY FOR TOTAL DISABILITY if payable by the policy after the termination of house confinement, should not be allowed in attacks of acute coryza.

EFFECTS: When a history of repeated colds exists and these last from one to two or three weeks and even though they do not cause total disability, an insurance company would hardly issue a health policy without a medical examination. Accident insurance, however, could be granted at any time, provided the other conditions were normal. The issuance of life insurance would depend on the result of the medical examination, whether it showed any involvement of the lungs or not; also the physical condition of the individual, family history, etc. If these were all favorable, it is probable that this form of insurance would be issued by all companies.

DIPHTHERIA

SYNONYMS: Membranous croup; membranous angina; putrid sore-throat; malignant ulcerous sore-throat.

INFORMATION: Diphtheria is an acute, contagious constitutional disease and is caused by a specific germ—the Klebs-Loeffler bacillus—which produces the disease two to seven days after infection occurs. It is more or less prevalent during all seasons of the year, but is more common during cold, damp weather and is more frequent in early childhood, although it is often seen in adult life. Any condition of weather or living which results in a deteriorated physical condition may be followed by an attack of this disease. The local symptoms involve the throat and are due to the growth of the germs and the swelling produced thereby; while the constitutional symptoms are the result of toxins produced by the bacillus and absorbed into the circulation.

SIGNS AND SYMPTOMS: The onset of this disease may be gradual, when there occurs a mild chill accompanied by a sore-throat, headache, loss of appetite, tenderness around the angle

of the jaws, stiffness of the neck and moderate fever running from 102° to 104° F. When the attack begins suddenly, there is a severe chill or prolonged chilliness, followed by increased temperature which reaches 103° to 105° F, difficult and painful deglutition, loss of strength and prostration. The pulse is rapid and feeble, the urine is scanty and often contains albumin and the bowels in the majority of cases are constipated; swelling and tenderness of the lymphatic glands of the neck always accompany this disease. Cough with expectoration of mucus is an annoying condition and in violent fits of coughing, shreds of membrane are torn off and ejected. On examination, the throat is found to be red, swollen and inflamed and covered with the diphtheritic membrane which is of a gray or grayish-yellow tinge and is found on the tonsils, the pillars of the fauces and the pharynx. Sometimes this membrane extends into the nose, mouth and larynx, producing nasal or laryngeal diphtheria. In cases with a nasal involvement there is a discharge from the nose and epistaxis; when the larynx is affected, hoarseness or loss of voice follows. These forms of diphtheria are usually secondary and when present denote a severe infection. The false membrane which results from the action of the bacillus on the mucous membrane, has an offensive odor and when dislodged leaves a raw, bleeding surface.

DIFFERENTIAL DIAGNOSIS: *Diphtheria* is positively diagnosed by securing a culture of the germ and growing it, when the specific Klebs-Loeffler bacillus is found and the existence of this germ is pathognomonic of diphtheria.

Pharyngitis resembles diphtheria when this disease is in its earlier stages before the false membrane forms, but as soon as this becomes well marked, the diagnosis is easily made and this is especially true if a culture has been obtained.

Follicular Tonsilitis is characterized by swelling that is limited to the tonsils which are red and swollen and which may be covered with a false membrane resembling that found in diphtheria. Absence of the continuation of severe constitutional symptoms and the specific bacillus of diphtheria marks the difference between this disease and true diphtheria.

Scarlet Fever in the earlier stages shows the mouth and pharnyx highly inflamed, but in this disease there is the characteristic strawberry tongue and rapid pulse which is out of all proportion to the temperature. The second day of the disease a diffuse red rash appears and covers the whole body and this is not

PLATE VIII

FIG. 1

Beginning or early stage of Diphtheria.

FIG. 2

Second day of disease, showing development of Membrane.

(H. K. Mulford Co.)

present in diphtheria and neither is the bacillus of diphtheria found.

COMPLICATIONS involving the nose, middle ear, bronchial tubes and lungs often follow diphtheria and when present disability is prolonged according to the time required for the recovery of the complication.

SEQUELAE: *Post-Diphtheritic Paralysis* is the most important sequelæ to this disease and is said to occur in about fifteen per cent. of all cases. Paralysis of the pharynx is most frequent, followed in turn by involvement of the eyes, heart and extremities. Paralysis involving the heart is the most serious sequelæ and often produces an unexpected fatal termination when the disease is thought to have subsided.

HOUSE CONFINEMENT lasts from 1 to 2 weeks in ordinary attacks of this disease when occurring in adults. Severe attacks of diphtheria require from 2 to 3 weeks of house confinement with an additional 5 to 10 days when a relapse occurs or when the weather conditions are unfavorable for the individual to leave the house.

TOTAL DISABILITY in the average case affecting an individual, lasts from 10 to 20 days; severe attacks require from 3 to 4 weeks. If a complication occurs, total disability is prolonged according to the complication; while if a sequelæ follows, such as paralysis of the throat or heart ensues, total disability may be increased 1 to 2 weeks and sometimes longer.

PARTIAL INDEMNITY FOR TOTAL DISABILITY if payable by the policy after the termination of house confinement usually does not require more than 1 to 2 weeks in all classes of risks.

EFFECTS: Individuals having suffered from a mild or severe attack of diphtheria, are insurable for all forms of insurance from three to six months after the date of complete recovery,—provided paralysis has not followed the attack. If this has occurred or complications ensued, life or health insurance would not be issued until after a medical examination, but accident insurance could be safely written at this time if no permanent paralysis of the heart or extremities was present.

EMPHYSEMA

SYNONYMS: Pulmonary emphysema; vesicular emphysema.

INFORMATION: Emphysema of the lung is an over distention of the air vesicles as the result of too forcible inspiration or excessive distention by forced expiration. The upper portion of the lungs and especially the left side is the site most often affected. It is more common in middle life and with certain occupations which require excessive expiratory efforts, such as musicians using wind instruments, glass blowers, etc.

SIGNS AND SYMPTOMS: The most pronounced symptom of this disease is dyspnea which is more marked after exertion. When a slight bronchitis occurs in conjunction with this dilitation, some cough exists with more or less expectoration. Old cases are usually complicated with dilitation of the heart, when the signs and symptoms referable to this condition are present. Inspection generally shows a rounded chest with the antero-posterior diameter increased, causing it to be known as the "barrel-shaped" chest. On auscultation the respiratory murmur is greatly weakened and often inaudible. Rales which are due to the accompanying bronchitis are also heard.

DIFFERENTIAL DIAGNOSIS: *Chronic Bronchitis* might be mistaken for a case of emphysema in the earlier stages, but when this condition is present no change is noticed in the formation of the chest and marked dyspnea is absent The percussion note is unchanged and not high pitched as in emphysema, while the vesicular murmur is harsh and roughened in bronchitis and in emphysema it is absent or scarcely perceptible.

Pneumothorax is usually sudden in onset and almost invariably is unilateral. The vesicular murmur is absent over the air cavity and diminished over the part of the lung that is compressed.

Spasmodic Asthma occurs in paroxysms and during the interval there is absence of symptoms indicating dilitation of the lungs; while in emphysema these signs and symptoms are constantly present.

COMPLICATIONS: *Diseases of the Lungs* including asthma and bronchitis together with dilitation of the heart, frequently complicate this disease. When pneumonia supervenes in lungs already impaired by emphysema, a fatal termination usually takes place.

HOUSE CONFINEMENT seldom occurs in cases of emphysema that are not complicated with some acute disease of the lungs or with pronounced and chronic dilitation of the heart. If any lung complication ensues the length of house confinement is

governed by the complication. When dilitation of the heart follows or accompanies emphysema, house confinement is uncertain; depending on the age and occupation of the individual, together with the length of time emphysema has been present and also the degree of dilitation which has taken place.

TOTAL DISABILITY is not often present until emphysema becomes complicated with some acute disease, when the length of time is governed by the complication. If dilitation of the heart is present and is pronounced and the individual is passed middle life, total disability may occur and last an indefinite time. However, 2 to 4 weeks are generally long enough for any one to sufficiently recover from such a condition as to enable some part of the occupation being resumed.

PARTIAL INDEMNITY FOR TOTAL DISABILITY if payable by the policy after the termination of house confinement, is determined by the complication which causes house confinement or total disability.

EFFECTS: When emphysema of the lungs exists in an individual, that person is not insurable for a life or health policy. Accident insurance, however, can usually be written if all other conditions are favorable; each case, however, should be considered by itself.

HEMOPTYSIS

SYNONYMS: Hemorrhage; bronchial hemorrhage; broncho-pulmonary hemorrhage; bronchorrhagia.

INFORMATION: Hemorrhage from the lungs may be due to a number of causes, the most frequent one probably being tuberculosis. This condition also occurs on account of excessive cardiac action, rupture of an aortic aneurysm, certain blood diseases as leukemia, purpura, etc., ulcers or injuries to the larynx or trachea, excessive over-exertion and traumatism involving the lungs. It is very important in an insurance examination that the exact cause and source of a hemorrhage from the mouth or nose be ascertained. If this is not done a rejection or cancellation of a policy may be the result, and if the hemorrhage is only a trivial one and comes from the nose or gums and has absolutely no bearing on the longevity or impairment of the risk, an injustice is done to the applicant, the agent and the company. Cases with a history of a hemorrhage from the lungs are looked upon with suspicion and unless it can be demonstrated that the hemorrhage

is not caused by a tuberculous condition, the individual is not considered insurable until some years after it has occurred; while if the bleeding is due to a temporary condition which results in a hemorrhage from the respiratory tract or the stomach, all forms of insurance may be issued a short time after the hemorrhage occurred.

SIGNS AND SYMPTOMS: A hemorrhage from the lungs occurs suddenly and first shows itself by a sensation of warmth in the chest, followed by tickling in the throat and a salty fluid in the mouth which is expectorated with or without coughing. The blood is of a bright red color, freely mixed with air which gives it a frothy appearance and may amount from one or two to eight or twelve ounces. Generally, however, the hemorrhage is small in quantity, unless it is the result of a ruptured aneurysm when it is excessive and continues until death results. When a hemorrhage from the lungs ceases, the mucus which is expectorated is blood tinged for a number of days. On auscultation, bubbling rales are heard over certain portions of the chest that mark the location from which the hemorrhage occurred.

DIFFERENTIAL DIAGNOSIS: *Epitaxis* or hemorrhage from the nose occurs through the nostrils, although some of the blood may be expectorated; cough is absent and the blood is unmixed with air or mucus, and examination of the nostrils and posterior nasal cavities will show the point from which the bleeding occurred.

Hematemesis or hemorrhage from the stomach is diagnosed by the fact that in this condition the blood is vomited and is not expectorated by coughing. It is dark in color, clotted, acid in reaction and mixed with the contents of the stomach. In such cases the blood may come from the lungs and be swallowed, when an examination of the chest will serve to distinguish any impairment. If the hemorrhage comes from the stomach alone, rales are absent in the lungs.

COMPLICATIONS: *Tuberculosis of the Lungs* or other diseases involving these organs are usually present when hemoptysis occurs, and the length of disability is governed by the primary affection and not by the hemorrhage which is generally a symptom of the more serious disease.

Ulcer of the Stomach may be the cause of hematemesis and unless disability results from the hemorrhage being excessive or peritonitis ensues from a rupture of the ulcer into the peritoneal cavity, disability is not often caused by the bleeding.

HOUSE CONFINEMENT is often existing when a hemorrhage occurs on account of some lung disease. If this is not the case, house confinement lasts from 2 or 3 days to 2 or 3 weeks; this time depending on the occupation of the individual, the physical condition, the amount of blood lost and the extent of involvement of the lungs by the disease which causes the hemorrhage.

TOTAL DISABILITY in individuals suffering from a pulmonary hemorrhage for the first few times, seldom lasts more than from 2 to 7 days, unless the hemorrhage has been excessive when from 2 to 3 weeks may be necessary on account of the weakened condition from the loss of blood. Individuals suffering from pulmonary tuberculosis which has advanced beyond the earlier stages, are often totally disabled when the hemorrhage occurs and the bleeding does not alter the surrounding conditions, except to confine the person to bed. Hemorrhage from the lungs or stomach when due to an accident or from the stomach when a diseased condition exists, is only a sign of injury or disease and total disability is governed by the character and results of the accident or disease.

PARTIAL INDEMNITY FOR TOTAL DISABILITY if payable by the policy after the termination of house confinement, is indefinite and depends on a number of conditions. If a hemorrhage from the lungs due to tuberculosis, it may require the limit of the policy; while if due to an ulcer or other disease of the stomach it may only last from 1 to 2 or 3 weeks.

EFFECTS: Cases with a history of a hemorrhage from the lungs that is not accidental in origin are uninsurable for a life policy until at least five years have elapsed without any evidence of a recurrence; a health policy can generally be issued from six to twelve months after the date of hemorrhage by eliminating indemnity for any disease of the respiratory organs; while an accident policy could be issued at the same time if the individual was apparently in good health. When the hemorrhage has been due to an accidental injury, all forms of insurance can be safely written from six to twelve months after complete recovery has taken place and no signs or symptoms have occurred during that interval.

INFLUENZA

SYNONYMS: La grippe; epidemic fever; epidemic catarrh; contagious fever; catarrhal fever.

INFORMATION: Influenza is an acute infectious disease that usually occurs in epidemics, although it is generally endemic. It is caused by an extremely small bacillus discovered in 1892 by Pfeiffer. One attack does not confer immunity and neither sex is more susceptible than the other. At the present day the word "la grippe" is applied by a great number of people to a severe cold which is complicated or accompanied by more or less bronchitis. An individual carrying one of the old special health policies that named bronchitis as one of the diseases for which indemnity was payable, considered it perfectly right to make a claim when the cause of the disability was either la grippe or a severe cold and allege that the illness was due to bronchitis. On account of a number of claims having been paid under false representations by claimants and attending physicians, it was necessary for insurance companies to eliminate bronchitis as one of the diseases for which indemnity was payable by this form of policy.

SIGNS AND SYMPTOMS: The onset of influenza in the majority of cases is sudden, beginning with a chill or chilliness, lassitude, pain in the head and back which is followed by fever, the temperature running as high as 101° to 103° F. This is accompanied by a rapid pulse, sneezing, redness of the eyes, hoarseness, cough with little or no expectoration, coated tongue, nausea, sometimes vomiting, frequently diarrhea and great prostration. This condition continues for three to seven days, when a slow convalescence begins or a relapse occurs and complications set in; the latter being especially true in the aged. The signs and symptoms of this disease are extremely variable, sometimes more markedly referring to the respiratory tract, other times the most important symptoms are gastro-intestinal, while again nervous symptoms are more prominent.

COMPLICATIONS: *Acute Bronchitis* may accompany or follow an attack of this disease, when the signs of involvement of the bronchial tubes are apparent on examination of the chest.

Pneumonia frequently follows in the aged who have suffered an attack of influenza. This occurs most often when the individual is an alcoholic or has suffered from exposure at the time influenza is contracted.

HOUSE CONFINEMENT lasts from 1 to 2 weeks in genuine cases of la grippe and this is sometimes increased from 7 to 10 days, when the attack occurs in the aged or in those debilitated from any cause and when severe relapses have been suffered. Complications which accompany this disease prolong

house confinement and are described under the name of the complication.

TOTAL DISABILITY lasts from 1 to 3 weeks, the average case being from 10 to 14 days. Each relapse that takes place prolongs the period of disability from 3 to 7 days and if the termination occurs during damp, wet weather, disability is increased from 2 to 4 days. Should complications arise, the length of total disability depends on the complication, the severity of it, and also the original disease, the age and physical condition of the individual.

PARTIAL INDEMNITY FOR TOTAL DISABILITY if payable by the policy after the termination of house confinement, may require from 1 to 2 or 3 weeks in cases where the attack has been severe and the physical condition of the party is much weakened or the age is well advanced.

EFFECTS: Persons under fifty years of age are insurable for any kind of a policy from two to three months after complete recovery from an attack of la grippe. When the age is beyond this limit, it is advisable that a medical examination be made before life or health insurance is granted. Accident insurance may be issued from one to two months after an attack of la grippe, when recovery has been sufficiently complete to prevent any special liability to accidents.

ACUTE CATARRHAL LARYNGITIS

SYNONYMS: Laryngitis; catarrhal laryngitis; sore-throat.

INFORMATION: Acute catarrhal laryngitis is an acute inflammation of the mucous membrane of the larynx and is caused by exposure and atmospheric changes, the inhalation of irritating dust or vapors, improper use of the voice and sometimes by the lodgment of a foreign body in the larynx.

SIGNS AND SYMPTOMS: An attack of laryngitis is sudden in onset and begins with a feeling of dryness and tickling in the back of the mouth; this is soon followed by hoarseness, dry cough and pain in the throat which is increased on talking, coughing or swallowing. The tongue is coated, appetite is poor and slight elevation of the temperature occurs. As the inflammation progresses, the hoarseness becomes more marked until it terminates in entire loss of the voice; the cough loses its harsh, dry character and is accompanied by expectoration which in some

cases is blood streaked. Examination of the throat shows the mucous membrane of the larynx to be red, swollen and injected.

DIFFERENTIAL DIAGNOSIS: *Edematous Laryngitis* or edema of the glottis may result from an acute attack of inflammation in this situation or follow some of the infectious diseases. The signs and symptoms are about the same as those occurring in acute laryngitis, in addition to which there occurs difficulty in breathing and deglutition; as the edema gradually increases, the difficulty in respiration becomes more pronounced and unless surgery intervenes death finally terminates the case. This form of laryngitis often develops when a chronic inflammation is existing, especially if ulceration of the larynx is present.

Spasmodic Laryngitis or false croup is most common in children and is diagnosed by the attacks occurring chiefly during the night and coming on in paroxysms with a dry cough and difficulty in respiration.

Croupous Laryngitis is regarded by most authorities as diphtheritic in character and is caused by the Klebs-Loeffler bacillus. This disease is sudden in onset and usually occurs in children, beginning with hoarseness of the voice, cough which is croupy in character, difficulty in breathing and attacks of spasm of the glottis whcih causes momentary suffocation, during which the face is cyanosed and extreme inspiratory efforts are made.

COMPLICATIONS: *Ulcers of the Larynx* result when acute laryngitis has been caused by the impaction of a foreign body. In such cases, disability is not prolonged except in individuals who require constant use of the voice which may not become normal for weeks or months.

Diphtheritic Laryngitis often occurs during an attack of diphtheria from an extension of the original disease. In such cases, disability is greatly prolonged and the length of time is controlled by the more serious disease.

HOUSE CONFINEMENT lasts from 7 to 10 days in the average case, due to the result of exposure or cold. When the inflammation is very severe from 2 to 3 weeks in the house may be necessary. If the termination of the disease occurs during cold and damp weather, the above time is increased from 2 to 3 or 4 days.

TOTAL DISABILITY is usually payable for the time that house confinement existed and in the ordinary case from 1 to 2 weeks are generally sufficient. Severe cases may require from 2 to 3 weeks of total disability and this time is almost always

necessary in individuals whose occupation requires constant use of the voice.

PARTIAL INDEMNITY FOR TOTAL DISABILITY if payable by the policy after the termination of house confinement, may require from 1 to 2 weeks in cases where the occupation requires singing, public speaking or much use of the voice.

EFFECTS: Insurance of all kinds can be issued from two to four weeks after an attack of laryngitis, provided complete recovery takes place and the inflammation is not tuberculous in character. If there is a history of repeated attacks, health insurance would not be issued without a waiver eliminating indemnity for this disease.

CONGESTION OF THE LUNGS

SYNONYMS: Hypostatic congestion; pulmonary engorgement.

INFORMATION: Congestion of the lungs when given as the cause of disability by attending physicians, usually means that the individual suffered from the first stage of pneumonia. If the claimant carried a special health policy in which indemnity was payable for disability due to pneumonia and the first stage of this disease only was present, he would not be entitled to indemnity under the contract. If a general disability policy is carried, it of course makes no difference whether the disease becomes fully developed or not. Congestion of the lungs may be caused by the inhalation of hot air, steam and irritating vapors; it may be the beginning stage of pneumonia or associated with other diseases of the lungs or pleura.

SIGNS AND SYMPTOMS: An attack of congestion of the lungs when it is the early stage of pneumonia, usually follows from exposure and is accompanied by a general cold, cough and expectoration of blood-streaked mucus, with slight pain in the chest and great difficulty in breathing; the pulse is increased and the temperature slightly elevated. On examination of the chest, broncho-vesicular breathing and subcrepitant rales are present over the area involved.

COMPLICATIONS: *Bronchitis* usually accompanies or complicates congestion of the lungs. When present, however, house confinement or disability is not often lengthened by this involvement.

Pneumonia most frequently follows acute congestion of the

lungs which is simply the first stage of this disease. When pneumonia becomes fully developed, total disability is described under this disease.

HOUSE CONFINEMENT lasts from 5 to 10 days in attacks of congestion of the lungs and this is sometimes increased from 1 to 3 or 4 days when the termination of the attack occurs in winter or during inclement weather.

TOTAL DISABILITY of 1 to 2 weeks is demanded by all classes of risks after an attack of acute congestion of the lungs. Very few uncomplicated cases require over 2 weeks.

PARTIAL INDEMNITY FOR TOTAL DISABILITY if payable by the policy is almost never necessary in these cases.

EFFECTS: When acute congestion of the lungs occurs during the fall or winter months, the individual is not insurable for a life or health policy until the following summer. If it occurs in the spring or summer, all forms of insurance can be written from two to three months after complete recovery. Accident insurance, however, can be issued from one to two months after complete recovery from an attack of this congestion, irrespective of the weather conditions.

PLEURITIS

SYNONYMS: Pleurisy; inflammation of the pleura; stitch in the side.

INFORMATION: Pleurisy is an acute inflammation of the pleura, usually unilateral and is caused by exposure, traumatism to the chest walls and in many cases is secondary to diseases of the lungs, diseases below the diaphragm, pericarditis, infectious fevers, rheumatism and Bright's disease.

SIGNS AND SYMPTOMS: Acute pleurisy when not a complication, begins with a chill and sharp lancinating pain in the affected side and this is aggravated by coughing, breathing or sneezing. Respirations are increased in number and are shallow, moderate fever develops, running from 101° to 103° F, and the pulse is increased to ninety or one hundred per minute. As the effusion collects, dyspnea becomes marked and is accompanied by cough and evidence of cardiac embarrassment exists. Inspection shows deficient expansion on the affected side and bulging of the intercostal spaces with displacement of the apex beat; on percussion dullness over the fluid is elicited and above, over the lung, tympanitic resonance. Auscultation and sometimes palpa-

PLATE IX

FIG. 1.—Anterior Aspect

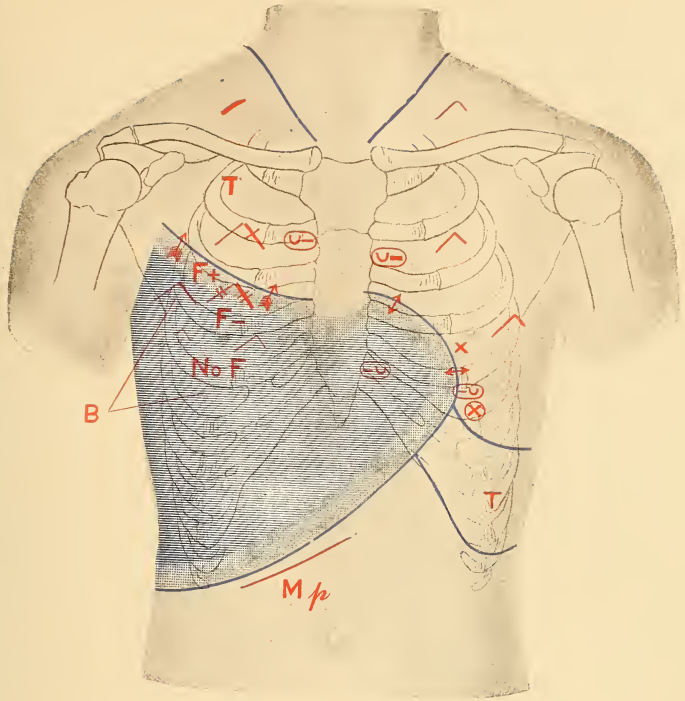
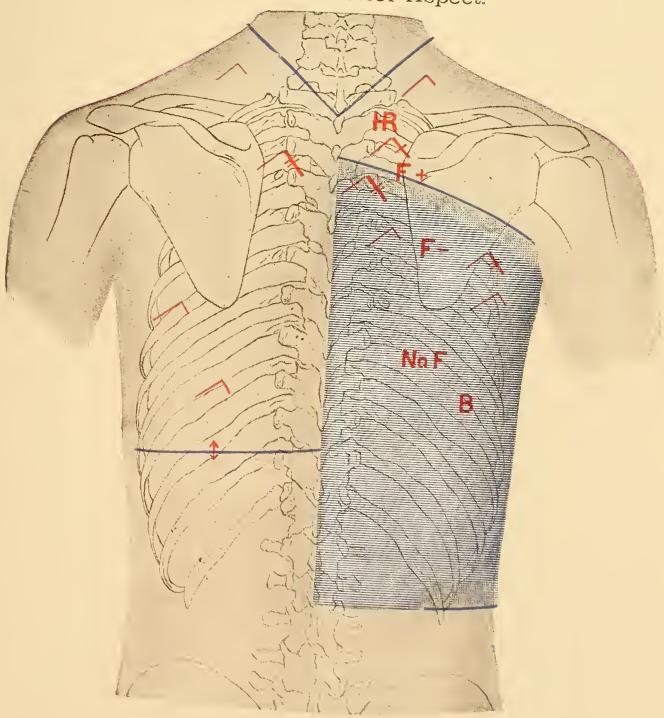


FIG. 2.—Posterior Aspect.



Pleurisy with Effusion (right-sided).

(Musser)

tion in the earlier stages reveal a friction sound and absence of the respiratory murmur. As the fluid collects, the friction sound disappears and reappears as it is absorbed.

DIFFERENTIAL DIAGNOSIS: *Pneumonia* is diagnosed from pleurisy by the character of its beginning with a severe cold and high fever, rusty expectoration, crepitant rales and no displacement of the apex beat.

Pericarditis with Effusion is characterized by dullness which is pyramidal in shape with the base below and the apex pointing above, the heart sounds are distant and muffled and cardiac embarrassment is present.

Enlargement of the Liver is sometimes mistaken for pleurisy with effusion, but in this condition the upper line of dullness is depressed on deep inspiration and elevated on expiration.

Pleurodynia is pain in the intercostal muscles and is differentiated from pleurisy by the diffuse character of the pain, with absence of signs denoting effusion and fever and no friction sounds.

Intercostal Neuralgia is characterized by sharp lancinating pain in the side, tenderness at the points of exit of the intercostal nerves and the absence of fever and friction sounds.

Hydrothorax and Pyothorax are best differentiated from pleurisy with effusion, when the fluid is aspirated. Hydrothorax also lacks elevation of temperature, absence of pain and is usually seen in conjunction with chronic cardiac or renal disease. Pyothorax shows itself by the characteristic constitutional symptoms of sepsis.

COMPLICATIONS: *Croupous Pneumonia* frequently occurs as a complication with pleurisy, either appearing as the primary or secondary disease. If the two diseases develop at about the same time, total disability generally lasts longer than when the pleurisy is uncomplicated.

Tuberculosis of the Lungs is often a complication of pleurisy and all cases of this disease with effusion must be carefully investigated, and when this is done a great many individuals are found to be tuberculous, the pleurisy simply being a manifestation of tuberculosis. Some well known authorities claim that almost every case of pleurisy is tuberculous in origin.

HOUSE CONFINEMENT in mild cases of pleurisy in which little, if any, effusion has taken place, requires from 2 to 3 weeks and this time may be prolonged from 3 to 7 days, when the termination occurs during inclement weather. Cases of pleurisy with serous effusion cause house confinement in all classes of

risks from 3 to 5 weeks. Aspiration in these cases has no bearing on the length of house confinement. Pleurisy with effusion which becomes purulent requires an operation for removal of the pus and house confinement lasts from 4 to 6 or 8 weeks after the operation is performed and usually from 2 to 3 weeks have elapsed before this procedure is necessary. When pleurisy complicates some other disease of the lungs, house confinement is prolonged 1 to 3 weeks, according to the severity of the complication and the primary disease, together with the physical condition of the individual at the time the pleurisy develops.

TOTAL DISABILITY in preferred risks when the duties of the occupation are performed inside and the disease is complicated with little or no effusion, lasts from 2 to 3 weeks. Under the same conditions, total disability lasts from 3 to 4 weeks when the duties of the occupation are performed in the open air. All classes of risks suffering from pleurisy with an effusion, are totally disabled from 4 to 6 or 8 weeks; this time depending on the quantity of the fluid in the chest cavity and the rapidity with which it is absorbed and also the number of times aspiration is necessary. Cases of pleurisy followed by purulent effusion in preferred risks which require an operation, are totally disabled from 6 to 8 or 10 weeks; the period of disability depending on the amount of pus that collects inside the cavity, the date and extent of the operation and the exact duties of the occupation. Ordinary risks under the same conditions are totally disabled from 2 to 3 or 4 months.

PARTIAL INDEMNITY FOR TOTAL DISABILITY when payable by the policy in addition to house confinement, requires from 1 to 3 or 6 weeks; this time being governed by the severity, character and termination of the pleurisy, the physical condition of the individual at the ending of the disease and the state of weather.

EFFECTS: Individuals with a history of having suffered from pleurisy which was uncomplicated by effusion or any disease are insurable for all kinds of insurance from three to six months after complete recovery. If a serious effusion was present, such cases are insurable for accident insurance from two to three months after recovery, and for life or health insurance from six to eight months after complete return to health. When the effusion has been purulent and an operation has been performed, life or health insurance can seldom be granted until two to three years after the date of operation and not even then, until after a

PLATE X

FIG. 1.—Anterior Aspect.

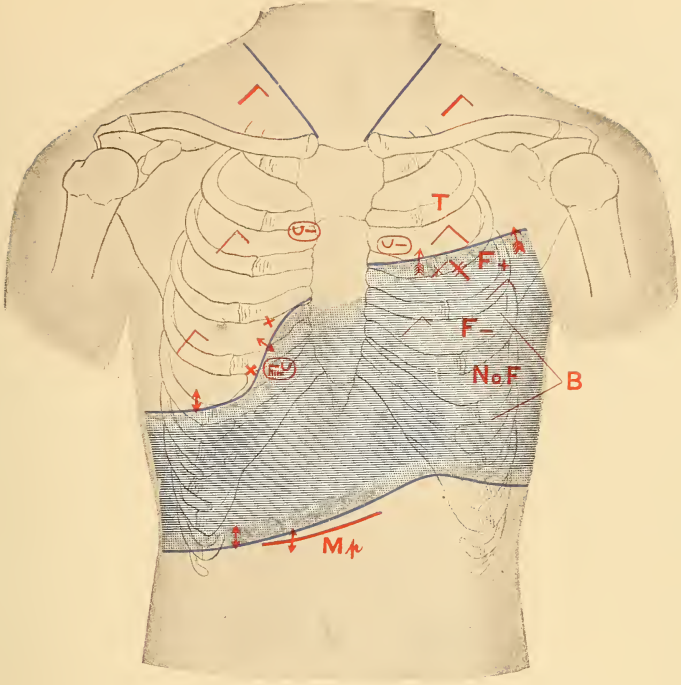
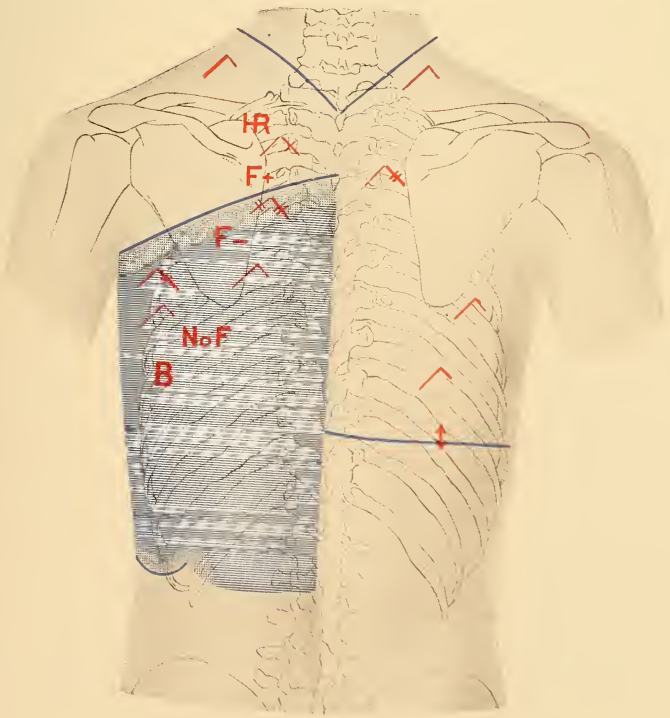


FIG. 2.—Posterior Aspect.



Pleurisy with Effusion (left-sided).

(Musser)

most careful physical examination has been made by a competent medical man. Accident insurance, however, in such cases could be issued as soon as the individual has apparently recovered from the illness, probably from three to six months after the external wound had completely healed.

PHARYNGITIS

SYNONYMS: Acute pharyngitis; acute catarrhal pharyngitis; catarrhal tonsilitis; angina catarrhalis; simple angina; acute sore-throat.

INFORMATION: Acute pharyngitis is a catarrhal inflammation of the pharynx and the adjacent parts, including the soft palate, tonsils and uvula, and is most often caused by exposure, but sometimes results from irritants that are swallowed or taken into the mouth. It is present in certain infectious diseases, such as measles, erysipelas, scarlet fever, diphtheria, smallpox, etc.

SIGNS AND SYMPTOMS: An attack of this disease frequently begins suddenly with chilliness, slight fever, headache, thirst, coated tongue, bad taste in the mouth, loss of appetite and painful deglutition. A constant desire to clear the throat is experienced and tenderness when making pressure on the neck. Inspection reveals a red, swollen and inflamed condition of the pharynx and surrounding parts.

DIFFERENTIAL DIAGNOSIS: *Diphtheria* is diagnosed from pharyngitis by the characteristic false membrane, pronounced prostration and the presence of the Klebs-Loeffler bacillus.

Acute Tonsilitis is sometimes mistaken for catarrhal pharyngitis, but acute cases of the former disease have more marked symptoms of systemic involvement, including rapid pulse, higher temperature and prostration.

Retropharyngeal Abscess may simulate an attack of pharyngitis, but in this condition there is high, irregular fever, with stiffness of the muscles of the neck and on examination a projection is seen inside the pharynx.

Rheumatic Pharyngitis is diagnosed by the intense pain and difficulty of deglutition, with absence of evidence of inflammation of the pharynx. It is usually followed by a manifestation of rheumatism involving some of the muscles.

COMPLICATIONS: *Abscess of the Ear* may result from acute pharyngitis and when present is due to the inflammation

traveling through the Eustachian tube. Deafness from the same cause may also ensue as a complication.

Laryngitis not infrequently follows an acute attack of pharyngitis and is due to the extension downward of the inflammation which results in the characteristic signs and symptoms of this disease.

SEQUELAE: *The Infectious Fevers* often manifest themselves in the beginning by an acute pharyngitis and if any of these diseases are present, the length of disability is governed by the disease and not by the pharyngitis which is simply a forerunner of an illness that is to follow.

HOUSE CONFINEMENT seldom lasts more than from 3 to 7 days in acute uncomplicated attacks of pharyngitis. If the pharyngitis is the beginning of another disease or is complicated by inflammation to surrounding parts, the length of disability is controlled by the succeeding disease or complication.

TOTAL DISABILITY in all classes of risks suffering from uncomplicated attacks of pharyngitis, seldom last more than 1 week. If the termination occurs during the winter months, this time may be prolonged from 1 to 3 days. Preferred risks whose occupation requires constant use of the voice are sometimes totally disabled from 10 to 14 days, when this inflammation exists and a slight involvement of the larynx occurs.

PARTIAL INDEMNITY FOR TOTAL DISABILITY if payable by the policy after the termination of house confinement, is almost never deserved following this acute inflammation.

EFFECTS: Individuals suffering from uncomplicated cases are insurable for all kinds of insurance as soon as recovery is complete. Should the inflammation result in an abscess of the middle ear, the individual is not insurable for a life policy until one to two years have elapsed after the abscess has entirely healed and no discharge shows itself during this time. Some insurance companies will issue a health policy from three to six months after the discharge from the abscess has entirely ceased; while others require from one to two years, the same as for life insurance. Accident insurance is sometimes granted irrespective of any discharge from the ear which may be present.

CATARRHAL PNEUMONIA

SYNONYMS: Lobular pneumonia; broncho-pneumonia; capillary bronchitis.

INFORMATION: Catarrhal pneumonia is an inflammation of the terminal bronchial tubes and surrounding alveoli of the lungs. It is more common in children and in the aged and most frequently follows from an extension downward of a bronchial catarrh. It is also a sequelæ of the acute diseases, such as la grippe, diphtheria, whooping cough, etc. If pneumonia results from a foreign body being drawn into the lungs, it is the catarrhal form. Sometimes indemnity is asked under an accident policy for catarrhal pneumonia due to a foreign body in the lungs, when it is claimed that the pneumonia is the result of this condition produced accidentally. Such cases may occur when the sensibility of the larynx is impaired for any reason and if this impaired sensibility is present and permits a foreign body to enter the lungs through the bronchial tubes and disability results, indemnity is not payable under an accident policy.

SIGNS AND SYMPTOMS: This disease begins in an insidious manner, the signs and symptoms being referable to a catarrhal bronchitis which generally becomes worse, showing the temperature moderately high, running from 101° to 103° F.; the pulse is irregular and rapid, respirations increased in number, with at first a dry cough soon to be followed, however, by expectoration of muco-purulent matter. Percussion shows scattered areas of dullness in both lungs and on auscultation there is heard bronchial breathing accompanied by mucous and sub-crepitant rales.

DIFFERENTIAL DIAGNOSIS: *Croupous Pneumonia* may sometimes be mistaken for catarrhal pneumonia and the points of differential diagnosis are pointed out under the former disease.

Bronchitis is often hard to differentiate from catarrhal pneumonia, but in this disease pain is complained of posterior to the sternum, fever is not so high and slight difficulty in breathing exists; on percussion, dullness is not found and on auscultation hard, bronchial breathing is heard over both lungs in the earlier stages.

Edema of the Lungs should not cause any difficulty in making a diagnosis, as edema in this situation is bilateral and is accompanied by cough, expectoration of blood-streaked mucus, with much dyspnea and absence of the vesicular murmur. In addition, there is no early history indicating a catarrhal condition and the temperature is only slightly elevated.

Acute Tuberculosis begins with a capillary bronchitis and the differential diagnosis between this and catarrhal pneumonia is not

often made until after the disease has been existing for some time, when the course, together with repeated physical and sputum examinations, will serve to make the correct diagnosis.

SEQUELAE: *Emphysema of the Lungs* sometimes supervenes after attacks of catarrhal pneumonia, and in such cases disability is prolonged and an impaired risk results.

Pulmonary Tuberculosis follows catarrhal bronchitis when this disease does not end in resolution. When tuberculosis of the lungs supervenes, disability is greatly prolonged if death does not cause a fatal termination in a short time.

HOUSE CONFINEMENT lasts from 1 to 3 weeks in all classes of risks suffering from catarrhal pneumonia and this time is increased 1 to 2 weeks when the disease occurs during the winter and in individuals whose physical condition is debilitated from any cause.

TOTAL DISABILITY in uncomplicated cases of this disease and in preferred risks, lasts from 1 to 3 or 4 weeks; this time depending on the season of the year, the age and physical condition of the claimant and the exact duties of the occupation. Ordinary risks are usually totally disabled 1 to 2 weeks longer than preferred risks when suffering from an attack of catarrhal pneumonia.

PARTIAL INDEMNITY FOR TOTAL DISABILITY if payable by the policy after the termination of house confinement, seldom demands more than 1 to 2 weeks in all classes of risks.

EFFECTS: When a history of an attack of catarrhal pneumonia exists, the individual is not insurable for a life or health policy until one to two years after the termination of the attack and a most careful medical examination shows no impairment of the lungs. An accident policy, however, may be written from three to six months after recovery has been complete.

CROUPOUS PNEUMONIA

SYNONYMS: Pneumonia; lobar pneumonia; pneumonitis; pleuro-pneumonia; fibrinous pneumonia; lung fever; winter fever.

INFORMATION: Pneumonia is an acute inflammatory condition of one or more lobes of the lungs; the lower right lobe being most frequently affected. It occurs more often in men than in women, is more common during the winter months and is caused by a specific micro-organism, the diplococcus of pneu-

monia as described by Fränkel. Predisposing causes are exposure, alcoholism, lowered vitality, poor hygienic surroundings and an existing disease, such as chronic Bright's disease, diabetes or some of the infectious fevers. One attack renders an individual susceptible to a recurrence of the disease. Pneumonia is one of the diseases for which indemnity is payable under a special or limited health policy. Aborted cases of pneumonia are those that go through the first stage or the stage of congestion only and are not covered by this limited policy.

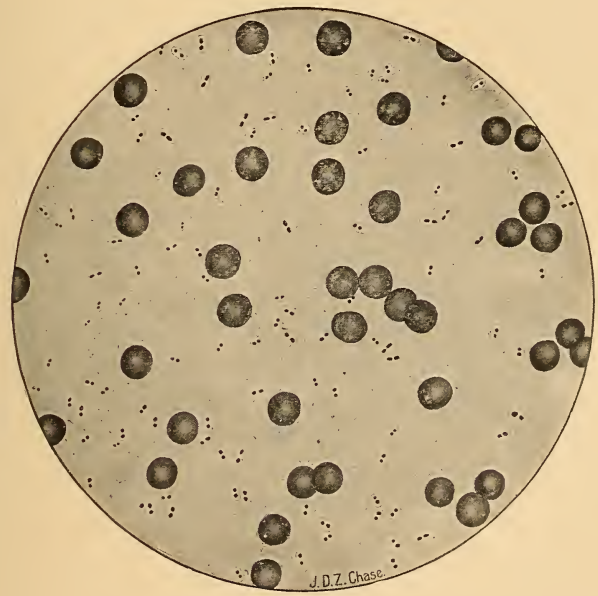


Fig. 102.—Diplococcus of Pneumonia from rabbit blood. (H. K. Mulford Co.)

SIGNS AND SYMPTOMS: An attack begins with a severe chill followed by a rapid rise of temperature, the fever reaching as high as 103° to 105° F. within the first twenty-four hours. This elevation of temperature is accompanied by marked dyspnea, shallow, rapid respirations, accelerated pulse and pain in the affected part of the lung which is increased by coughing, deep breathing and sneezing. The cough at first is dry, followed later by expectoration of bloody, tenacious sputum or "rusty sputum," as it is called. These symptoms continue until the fifth to the eleventh day, when the crisis usually takes place by a sudden fall of temperature and convalescence is established. On palpation, vocal

fremitus is increased over the consolidated part of the lung which gives a dull note on percussion and on auscultation crepitant rales are heard at the end of deep inspirations.

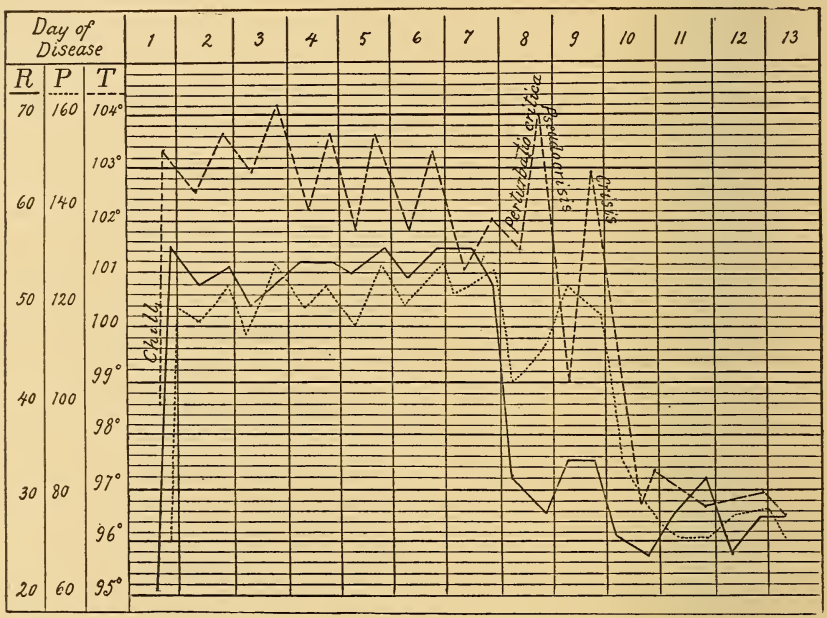


Fig. 103.—Temperature, pulse, and respiration curve in croupous pneumonia. (Sahli).

DIFFERENTIAL DIAGNOSIS: *Croupous Pneumonia* is easily diagnosed from catarrhal pneumonia by means of the following table from Stevens:

Croupous Pneumonia	Catarrhal Pneumonia
Usually a primary disease.	Usually secondary to bronchitis or an acute infectious disease.
The onset is abrupt and with a distinct chill.	The onset is gradual and without a distinct chill.
The fever is high, regular, and generally ends by crisis between the sixth and ninth day.	The fever is moderately high, very irregular and ends by lysis after an indefinite period, sometimes of two or three weeks' duration.
The sputum is rusty and translucent.	The sputum is mucopurulent or glairy and tenacious.

In the majority of cases only one lung is affected.	Both lungs are commonly affected.
The physical signs are distinct and indicate a large uniform consolidation.	The physical signs are indistinct and indicate scattered areas of consolidation.

Pleurisy is often mistaken for an attack of croupous pneumonia, but this disease seldom begins with a chill, the temperature is not as high, the level of dullness in the chest is changeable, which is not the case in pneumonia, the apex beat is displaced in pneumonia and absent in pleurisy and a friction sound accompanies breathing in cases of pleurisy, while bulging of the intercostal spaces is not seen in pneumonia and the crepitant rale is heard.

Edema usually occurs in conjunction with another disease and begins insidiously; both lungs are affected, which is seldom the case in a beginning pneumonia, elevation of temperature and pain are absent in this condition, while they are present in pneumonia, expectoration in edema is serous, but is rusty in pneumonia, and auscultation shows weak breathing and sub-crepitant rales in edema.

Acute Pulmonary Tuberculosis is diagnosed by the family, together with the personal history, the age and appearance of the individual, the character of the sputum which contains shreds of lung tissue, the remittent type of fever, night sweats, emaciation, and the presence of tubercle bacilli.

COMPLICATIONS: *Endocarditis* not infrequently complicates this disease and in such cases the onset is generally gradual with or without chills, the temperature is irregular, pulse also irregular and rapid, increased difficulty in breathing and embarrassed cardiac action with precordial pain exist.

Pleurisy often supervenes and complicates pneumonia, and in such cases the signs and symptoms of this disease are noticed in addition to those produced by pneumonia.

HOUSE CONFINEMENT in aborted cases of pneumonia and those that terminate in death, lasts from 1 to 2 weeks in all classes of risks. Ordinary uncomplicated attacks which pursue a regular course, require from 2 to 4 weeks of house confinement. Severe cases in which the base and apex are involved or a part of each lung, require from 3 to 6 weeks. When pneumonia is complicated by any other disease, the above time is increased ac-

cording to the duration of the complication. If an attack of pneumonia terminates during exceedingly severe winter weather or the occupation of the individual is performed without shelter, house confinement is increased 1 to 2 weeks in such cases.

TOTAL DISABILITY: Aborted cases or those in which the first stage of pneumonia is reached and is followed by convalescence, require from 1 to 2 weeks of total disability, and in very severe cases death usually occurs within this time. Ordinary cases which terminate by crisis are totally disabled from 2 to 4 weeks. Individuals suffering from severe attacks of this disease in which one or both lungs are more or less involved, are totally disabled from 3 to 6 weeks; this time may be prolonged 1 to 2 weeks on account of the severity of the inflammation, termination by lysis and weather conditions.

PARTIAL INDEMNITY FOR TOTAL DISABILITY if payable by the policy after the termination of house confinement, usually requires from 3 to 7 days in aborted cases; from 1 to 2 weeks in uncomplicated ones that have passed through all the stages of the disease and from 2 to 3 weeks in the severe ones which leave the individual in a debilitated condition.

EFFECTS: When an attack of pneumonia occurs during the fall or winter, the sufferer is not insurable for life or health insurance until the following summer and even then, not until a medical examination has been made and the report is satisfactory. Pneumonia occurring during the summer months, renders the individual uninsurable for life or health insurance until the ensuing summer. Accident insurance, however, can generally be safely written on such individuals from one to two months after complete recovery takes place.

PNEUMOTHORAX

SYNONYMS: Hydropneumothorax; air in the pleural cavity.

INFORMATION: When air exists in the pleural cavity outside of the lungs, it is frequently the result of the perforation of the lungs due to tuberculosis and usually follows a violent paroxysm of coughing. This condition may also exist from other causes which rupture the lung and allow the air to escape into the pleural cavity, such as the fractured end of a rib perforating the lung, puncture of the chest wall, abscess, gangrene, and in rare instances rupture of an emphysematous lung.

SIGNS AND SYMPTOMS: This condition is usually sudden in onset accompanied by sharp pain in the side, great difficulty in breathing, subnormal temperature, weak pulse, coldness of the extremities, in fact all signs and symptoms of severe shock. Inspection shows bulging of the intercostal spaces on the affected side with respiratory movements on the same side lessened or abolished. Vocal fremitus is diminished and dullness is elicited over the effusion when it takes place. Auscultation shows the respiratory murmur to be almost inaudible or absent and when the fistula is open, amphoric breathing is heard.

DIFFERENTIAL DIAGNOSIS: *Dilitation of the Stomach* in some cases might be mistaken for this condition, because the tympanitic note that is heard on percussion over a pneumothorax is also heard over the dilated stomach in the abdomen, and when swallowing takes place the passage of the liquid into the stomach is readily detected by means of a stethoscope.

COMPLICATIONS: *Hemothorax* or blood in the pleural cavity usually complicates pneumothorax. If this condition exists after an accidental puncture of the chest wall, it may result in uncontrollable bleeding which ends in death.

Hydrothorax accompanies a pneumothorax and is distinguished by the signs and symptoms described above. Disability is not often prolonged by this complication.

HOUSE CONFINEMENT is generally existing when a pneumothorax occurs; the individual being already a sufferer from tuberculosis of the lungs and this condition is one of the later complications. If the pneumothorax results from a punctured wound of the chest or the fractured end of a rib perforates the lung, house confinement lasts from 2 to 4 weeks according to the cause, and also the treatment.

TOTAL DISABILITY in cases of pneumothorax which result from accidental punctures of the lung by the fractured end of a rib, lasts from 2 to 4 weeks in preferred risks. Under the same conditions, ordinary risks are totally disabled from 4 to 6 and sometimes 8 weeks. If the pneumothorax is due to a puncture of the chest wall, an operation is generally performed shortly after the puncture occurs, when total disability lasts from 4 to 6 weeks in preferred risks and from 6 to 8 weeks in ordinary ones. If the condition occurs during the progress of a case of tuberculosis of the lungs, total disability is already existing in the ma-

jority of cases and this complication simply aggravates the physical condition of the individual.

PARTIAL INDEMNITY FOR TOTAL DISABILITY if payable by the policy after the termination of house confinement, is sometimes allowable to preferred risks, when from 1 to 3 weeks are sufficient in the majority of cases.

EFFECTS: Individuals having suffered from a pneumothorax produced accidentally, in which the lungs were normal before the accident and where recovery becomes complete without an operation, are not insurable for a life or health policy until at least one year after complete recovery takes place. If an operation is necessary for the cure of this condition, a life or health policy would not be issued until at least three to five years had elapsed without any symptoms referable to the chest as the result of the accident and operation. Accident insurance, however, in both cases can usually be safely written from three to six months after the ending of disability. If pneumothorax occurs from any other cause, life or health insurance would hardly be considered by any insurance company until five to ten years after recovery had been pronounced complete.

ACUTE TONSILITIS

SYNONYMS: Tonsilitis; follicular tonsilitis; amygdalitis; quinsy; suppurative tonsilitis; phlegmonous pharyngitis.

INFORMATION: Tonsilitis is an acute inflammation of the tonsils, involving one or both and occurring at all ages, but more common from twenty to thirty years and is caused by exposure, although a predisposition for this disease apparently exists in those of a rheumatic tendency. The majority of these cases are usually follicular tonsilitis and when the inflammation goes on to suppuration, the phlegmonous form develops.

SIGNS AND SYMPTOMS: An attack of this disease begins with a chill or chilliness followed by a rapid rise of temperature reaching 102° to 104° F, and is accompanied by accelerated pulse, headache, painful deglutition with swelling of the lymphatic glands and tenderness at the angle of the jaws. Examination of the throat shows the tonsils swollen and inflamed and in the follicular form, small yellow spots are scattered over the surfaces. In the phlegmonous variety, the tonsils are so greatly swollen that in some cases they almost touch each other. Intense, throb-

bing pain is present and as the gland goes on to suppuration, it becomes soft and fluctuating and at the point which is about to rupture, a yellowish spot appears.

DIFFERENTIAL DIAGNOSIS: *Diphtheria* in the early stages may sometimes be mistaken and diagnosed as acute tonsilitis, but in this disease there soon forms a false membrane that leaves a raw, bleeding surface when it is detached and a culture from this membrane shows the Klebs-Loeffler bacillus.

Scarlet Fever almost invariably commences with an inflammation of the larynx, including the tonsils. In this disease the strawberry tongue is a characteristic point of diagnosis and

Fig. 104.—Enlarged faucial tonsils; the tonsils shows a large crypt. (Kyle).

within twenty-four to thirty-six hours the peculiar punctiform eruption of scarlet fever appears.

COMPLICATIONS: *Abscess of the Middle Ear* may follow this inflammation and be due to infection which travels through the Eustachian tube. If this complication arises, disability is prolonged according to the time required for abscess of the ear.

Congestion of the Kidneys frequently follows an attack of acute tonsilitis. If this complication ensues, total disability is prolonged according to the time required for the congestion to subside and the kidneys to become normal again.

HOUSE CONFINEMENT in all classes of risks suffering from acute follicular tonsilitis lasts from 3 to 7 days. When the

inflammation goes on to suppuration and quinsy results, house confinement lasts from 1 to 2 weeks. If the inflammation terminates in recovery during inclement weather, house confinement is prolonged from 1 to 3 or 5 days under either of the above varieties.

TOTAL DISABILITY in all classes of risks usually lasts 1 week when follicular tonsilitis has been the cause. If this form results in suppurative tonsilitis, total disability lasts from 1 to 2 weeks. In preferred risks whose occupation requires constant use of the voice, this period of disability may be increased 5 to 10 days, on account of the duties of the occupation and also when the termination occurs during damp, winter weather.

PARTIAL INDEMNITY FOR TOTAL DISABILITY if payable by the policy after the termination of house confinement, is rarely necessary and when demanded from 2 to 5 days are generally sufficient.

EFFECTS: Individuals having suffered from one or more attacks of acute tonsilitis are insurable for a life or accident policy one to two months after complete recovery from the attack. Health insurance, however, would not be issued to such persons until one to two months after recovery and not unless a waiver eliminating indemnity for disability from this disease was placed on the policy.

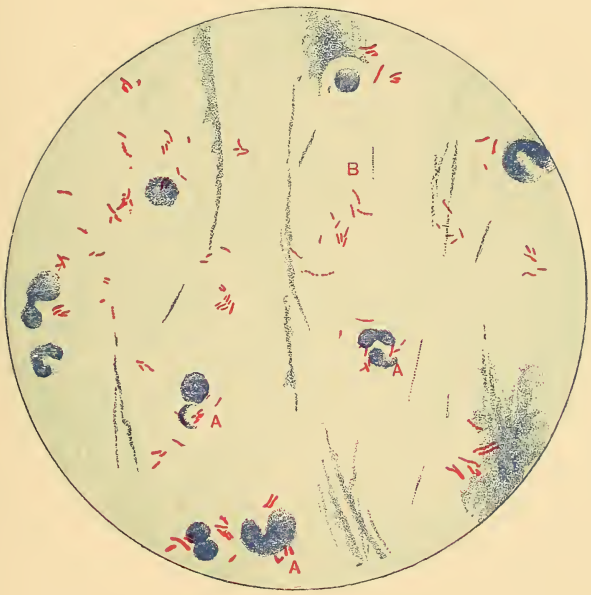
PULMONARY TUBERCULOSIS

SYNONYMS: Consumption; pulmonary consumption; tuberculosis; incipient phthisis; phthisis; phthisis pulmonalis; chronic phthisis; chronic ulcerative phthisis.

INFORMATION: Pulmonary tuberculosis is a chronic disease of the lungs that is caused by the bacillus of tuberculosis gaining access to the lung tissue where it multiplies and causes systemic signs and symptoms. It is more common in early adult life and in individuals with a hereditary history of the disease in the family. Certain occupations, such as those in which dust or irritating vapors are constantly inhaled, living in unsanitary surroundings and a lowered vitality are predisposing causes.

SIGNS AND SYMPTOMS: This disease is insidious in onset, usually beginning with a cold that persists and resists the ordinary home treatments. It is accompanied or followed by indigestion, gradual loss of weight, cough which is referred to as coming from the throat with slight, if any, expectoration, irritable

PLATE XI



Tubercle Bacilli in Sputum.

A. Showing tubercle bacilli inside the leukocytes (phagocytosis).
B. Tubercle bacilli outside the leukocytes.

(H. K. Mulford Co.)

disposition, loss of color in the face and sometimes hemoptysis, although this is generally a late sign of the affection. As the disease advances, the cough becomes more free, expectoration more profuse and the expectorated matter contains shreds of lung tissue and the tubercle bacilli. Elevation of temperature in the afternoons and evenings with a subnormal temperature in the early morning hours is a characteristic sign, the pulse is increased in rapidity and pain in the lungs is complained of, night sweats occur regularly and emaciation follows. Inspection shows a depression over the apices of the lungs,—when involved,—vocal fremitus is slightly increased on palpation, and on percussion impaired resonance is elicited and in time the percussion note becomes dull over consolidated areas and tympanitic over cavities. Auscultation shows slightly prolonged expiration with bronchial breathing accompanied by crackling and subcrepitant rales which are heard at the termination of inspiration and expiration.

DIFFERENTIAL DIAGNOSIS: The early diagnosis of this disease is highly important and should be made by means of the history and the physical signs and symptoms. The diagnosis is generally made too late for a cure of the disease, when it is not made until the bacilli appears in the sputum. Among the early signs and symptoms of the disease is a history of persistent dyspepsia and slight cough with little or no expectoration in the morning. On inspection, the pupils are found widely dilated even in the brightest light, the pulse is accelerated, the rate being above the normal and usually it is of lowered tension. Slight elevation of temperature in the afternoons and evenings, with a subnormal stage late at night or in the early morning hours is pathognomonic. The vagus reflex as described by Dr. Mays, of Philadelphia, is said to be one of the early signs. A careful examination of the lungs will show impaired resonance over the area involved and on auscultation, the expiratory murmur is prolonged and the pitch is raised.

Acute Miliary Tuberculosis is often mistaken for typhoid fever, but in this latter disease epitaxis is common and a roseola eruption is present, the Widal reaction is usually obtainable, while the temperature runs the characteristic course and none of these are present in cases of miliary tuberculosis.

COMPLICATIONS are so varied and involve so many different parts of the body that it would not be feasible to attempt to describe each one separately. Involvement of the covering of the brain, of the alimentary tract or some of the organs in con-

nection with it, of the joints, especially the larger ones and the genital organs, are some of the parts which may be affected and complicate acute tuberculosis of the lungs.

HOUSE CONFINEMENT lasts from 3 to 6 or 8 weeks in cases of acute miliary tuberculosis; this being at the termination of the disease. Ordinary cases of tuberculosis of the lungs which have been diagnosed after more or less partial disability, sometimes require from 2 to 4 or 6 weeks of house confinement, at the end of which time modern treatment demands that the individual live in the open air all the time. If this treatment is not successful and recovery does not take place, house confinement of from 2 to 6 or 8 weeks again ensues and marks the end of the life of the individual. Fibroid phthisis seldom requires house confinement until the termination of the disease is reached, when from 1 to 2 or 3 months and sometimes longer may be necessary in these cases.

TOTAL DISABILITY in cases of acute miliary tuberculosis lasts from 3 to 12 weeks; the usual time being from 6 to 8 weeks only Ordinary cases of tuberculosis are usually totally disabled from 2 to 4 weeks before house confinement ensues and this period is prolonged by the time required in the house and also the time necessary for a partial or complete cure of the disease; this latter ranging from 2 to 6 or 12 months. When total disability takes place at the termination of this disease, from 3 to 6 or 10 weeks are usually sufficient to cover the time from the ending of attention to business until death ensues. Fibroid phthisis being a chronic disease, seldom causes total disability until the termination, this beginning from 1 to 3 or 4 weeks before house confinement commences and persisting during that period, finally ending in the death of the individual.

PARTIAL INDEMNITY FOR TOTAL DISABILITY if payable by the policy after the termination of house confinement, may last from 1 to 6 months or more; this time depending on the extent of the disease, the physical and financial condition of the individual and the treatment.

EFFECTS: When an individual has once suffered from pulmonary tuberculosis, even in a mild form, insurance of all kinds must be denied until four to six years have elapsed after complete recovery has ensued and no signs or symptoms of the disease have manifested themselves within that period. Some insurance companies would issue accident policies on cases of tuberculosis that have been reported cured from one to two or

three years after the date of recovery, but it is questionable if such is good underwriting. The majority of companies decline to issue any kind of insurance at any time on any one who has been afflicted with tuberculosis and a cure reported.

WHOOPING COUGH

SYNONYMS: Pertussis; hooping cough.

INFORMATION: Whooping cough is a paroxysmal, contagious disease, most common in childhood, although sometimes seen in adult life. One attack confers immunity which usually persists during the life of the individual.

SIGNS AND SYMPTOMS of this disease are divided into three stages, the catarrhal, paroxysmal and the terminal. The catarrhal stage begins with symptoms of catarrh of the nasopharnyx accompanied by sneezing, discharge from the nose, slight fever and cough, and lasts from one to two weeks. The second stage then follows and is characterized by persistent, hard coughing which often causes vomiting and ends with a long deep crowing inspiration or whoop. The terminal stage is marked by long intervals between the paroxysms which are shorter and less violent until finally after one to two weeks they cease entirely.

DIFFERENTIAL DIAGNOSIS: *Whooping Cough* is almost impossible to diagnose from an ordinary cold in the catarrhal stage, but as soon as the paroxysms occur, the diagnosis is readily made.

SEQUELAE: *Meningeal Hemorrhages* are sometimes produced by violent paroxysms of coughing in an individual who is advanced in years. In such cases the usual signs and symptoms of pressure on the brain follows and the length of disability is increased according to the complication.

Emphysema or collapse of the lung may complicate or follow violent paroxysms of this disease; in such cases disability is prolonged, the duration of disability being governed by the complication or sequelæ.

HOUSE CONFINEMENT does not exist when whooping cough occurs in adults during the spring, summer or fall months, but if the disease is contracted during the winter, house confinement of from 1 to 2 or 3 weeks may be necessary when the individual is advanced in years or complications ensue.

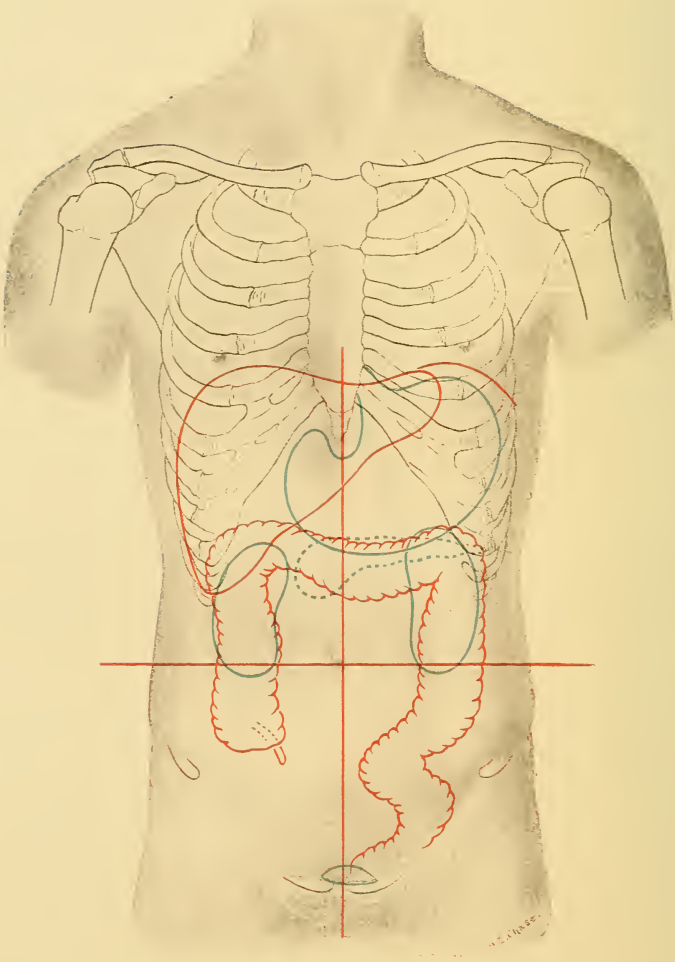
TOTAL DISABILITY is seldom present when this disease does not cause house confinement, unless it is necessary to

change climates for the cure of the malady, when from 2 to 4 weeks are generally ample.

PARTIAL INDEMNITY FOR TOTAL DISABILITY if payable by the policy after the termination of house confinement, if present, may last from 1 to 2 or 3 weeks in severe cases without regard to the season of the year.

EFFECTS: When whooping cough occurs in adults and complete recovery ensues without any complications, the individual is insurable for all kinds of insurance two to four months after the termination of the disease. Should a hemorrhage within the skull occur from the violent paroxysms of coughing, all forms of insurance would be denied the person on account of this complication. If the lungs are distended or injured in any way by the paroxysms of coughing, life or health insurance would not be issued until one to two years after the termination of the disease and the complication, and a medical examination has shown the lungs to have again become normal. Accident insurance in such cases, however, could be safely granted from four to six months after the termination of disability.

PLATE XII



Quadrants of the Abdomen. Position of the Viscera.

Liver and colon—red lines. Stomach, kidneys and bladder—solid green lines. Pancreas—dotted green lines.

(Musser.)

CHAPTER XVI

DISEASES OF THE DIGESTIVE SYSTEM

APPENDICITIS

SYNONYMS: Typhlitis; perityphlitis; perityphlitic abscess; pericaecal abscess; iliac abscess; suppurative appendicitis.

INFORMATION: Appendicitis is an inflammation of the appendix vermiformis and is caused by a variety of germs, the chief of which are the bacilli coli communis acting on the lining membrane of the appendix that has been abraded or rendered susceptible to the action of these germs by a foreign body within, traumatism or errors in diet leading to intestinal catarrh. It is more common in the male than in the female and is most frequently seen between the ages of ten and thirty years.

SIGNS AND SYMPTOMS: An attack of appendicitis begins with a feeling of weight and soreness in the right iliac region and this is soon followed by severe pain, nausea and vomiting. Swelling appears in this situation, rigidity of the abdominal walls occurs, the pulse is accelerated and the temperature ranges from 100° to 103° or 104° F. If the attack results in suppurative appendicitis, hectic symptoms appear and unless an operation is performed, death generally results, although sometimes the abscess breaks externally or into the bowel or vagina and escapes.

DIFFERENTIAL DIAGNOSIS: *Diseases of the Ovaries and Fallopian Tubes* are sometimes mistaken for appendicitis, but if a careful history of the trouble is secured, together with a bimanual examination, such an error should not often occur.

Cholecystitis is marked by pain and tenderness over the region of the gall-bladder in the right hypochondrium. In this affection, the cystic duct is obstructed and sometimes the swollen gall-bladder is palpable. A history of the passage of gall stones would help to distinguish this condition from an attack of appendicitis.

Renal Colic is characterized by pain in the loins and sometimes in the iliac region. When this condition is present, pressure over the region of the kidneys causes increased pain; there

is frequency of micturition, the urine is albuminous and sometimes hematuria is present. During an attack of renal colic, sharp, lancinating pain is present in the back and loins and this position of the pain is not complained of in an attack of appendicitis.

Typhoid Fever is not infrequently mistaken for an attack of appendicitis. In typhoid fever, however, there is epistaxis, enlargement of the spleen, the characteristic rash and temperature curve, while the blood usually gives the Widal reaction.

Hip Joint Disease may be mistaken for appendicitis, but in the former, especially if the right hip is involved, it cannot be extended under ether, while in appendicitis, flexion is easily overcome when unconsciousness is produced.

Acute Tuberculous Peritonitis is sometimes diagnosed when a perforation of the appendix exists. In tuberculous peritonitis evidence of the disease is usually present in some other part of the body, it is more gradual in onset and swelling of the abdomen with tension is absent.

Ptomaine Poisoning may cause an error in diagnosis, but in the former the pain is diffuse, extending over the entire abdomen, diarrhea is present and nervous symptoms follow. The heart may become suddenly involved and death ensue.

COMPLICATIONS: *Diffuse Peritonitis* always follows an attack of appendicitis when infection of the peritoneal cavity occurs. If this complication is present, death almost invariably terminates the case in a short time.

Typhoid Fever occasionally complicates or is complicated by an attack of appendicitis. In such cases if the appendix is removed during the progress of typhoid fever,—and recovery takes place,—the prolonged disability is the result of the fever and not the appendicitis.

Suppurative or Gangrenous Appendicitis or the formation of an abscess around the appendix results in an operation at once and also the prolongation of disability.

HOUSE CONFINEMENT of from 7 to 10 days is usually necessary in cases of catarrhal appendicitis which are not treated by an operation. When this is performed, house confinement lasts from 3 to 6 weeks; this time depending on the physical condition of the individual and also the views of the surgeon as to the method of treatment. If on operating an abscess cavity is

found and healing by granulation is necessary, house confinement may last from 6 or 8 weeks.

TOTAL DISABILITY in uncomplicated cases of catarrhal appendicitis which are not treated by operation require from 1 to 2 weeks. Operative cases in which an inflammatory condition only is found at the time the operation is performed, are totally disabled from 3 to 6 weeks. When pus has formed and an operation is necessary for the removal of the same total disability lasts from 6 to 10 weeks, beginning with the date of operation and this time may have been preceded by from 3 to 7 or 10 days of total disability.

PARTIAL INDEMNITY FOR TOTAL DISABILITY if payable by the policy after the termination of house confinement, should not require more than from 2 to 5 days in the catarrhal form. Uncomplicated cases which have been operated upon, sometimes demand from 1 to 2 weeks of this form of disability and when an abscess has been present, from 2 to 4 weeks may be necessary after the termination of house confinement before some of the duties of the occupation can be resumed.

EFFECTS: Individuals with a history of having suffered an attack of appendicitis are not insurable for a life or health policy until three to five years have elapsed without any signs or symptoms of the disease, unless an operation has been performed and the appendix removed, when life or health insurance can be written from four to eight months after complete recovery. Should such a history be present, health insurance can be written by attaching a waiver to the policy eliminating indemnity for disability caused by this disease or any complication. A history of this disease has no bearing on the issuance of an accident policy. If an operation has been performed, insurance companies generally place a waiver on a health policy eliminating indemnity for disability due to a hernia and this applies also to a life policy, unless the individual agrees to wear a truss, if such a procedure becomes necessary. A waiver regarding a hernia is especially necessary on persons who are fifty years of age or over.

CHOLERA MORBUS

SYNONYMS: Bilious cholera; sporadic cholera; English cholera; cholera Nostras.

INFORMATION: Cholera morbus is an acute catarrhal inflammation of the mucous membrane of the stomach and in-

testines; it is more common in summer and is due to the ingestion of irritating food and sudden changes of temperature.

SIGNS AND SYMPTOMS: An attack of this disease is sudden in onset, beginning with cramps in the stomach and followed by nausea, vomiting and purging with intense thirst, fever and prostration which becomes marked in severe attacks. The duration of these symptoms is usually from twenty-four to thirty-six hours except in extreme cases when they may persist for one to three days. Death seldom occurs, as the mortality is said to be only five per cent.

DIFFERENTIAL DIAGNOSIS: *Poisoning* by intent should always be held in mind when a claim is received alleging cholera morbus as the cause of disability. In such cases, a history of financial embarrassment and melancholia due to family troubles or illness can almost invariably be secured when a mineral poison has been taken by intent. In addition, evidence of the poisoning may be found on the face, lips or in the mouth and a burning pain is complained of in these parts; this extending to the stomach, intestines and rectum. Vomiting when present is extremely painful and the ejected matter contains blood stained mucus or blood with shreds of mucous membrane from the stomach and esophagus. Purging follows, the stools being bloody and in some poisons the drug can be detected in the discharges. When disability results from poisons taken intentionally, accident or health insurance policies do not cover such cases. If it can be positively proven that the poison has been taken accidentally, an insurance company would be liable under an accident policy for the resulting disability and the same is true under a general disability policy.

Asiatic Cholera occurs after exposure, lacks a history of dietetic excesses and is best diagnosed by the characteristic "rice-water" stools, together with the presence of Koch's comma-bacillus.

HOUSE CONFINEMENT in ordinary attacks of this disease does not often last more than 1 to 2 days. When very severe, from 3 to 5 days may sometimes be necessary, at the end of this time the individual although weak and emaciated, is able to go outside.

TOTAL DISABILITY seldom lasts more than from 2 to 4 days and unless a health policy pays for disability under one week, such cases are not entitled to indemnity. Sometimes 1

week is necessary for exceedingly severe attacks of this disease, when the individual is so weakened by the constant diarrhea that a return to business is impossible under that time.

PARTIAL INDEMNITY FOR TOTAL DISABILITY if payable by the policy after the termination of house confinement, almost never requires more than from 2 to 5 days.

EFFECTS: Insurable for all kinds of insurance as soon as recovery is complete.

ACUTE DYSENTERY

SYNONYMS: Catarrhal dysentery; amebic dysentery; bacillary dysentery; colitis; ulcerative colitis; bloody flux.

INFORMATION: Colitis is an acute inflammation of the mucous membrane lining the large intestines. It occurs in the temperate zone most frequently in the catarrhal form, while in the tropics, the amebic form is most common. Dysentery of the catarrhal type is more often contracted during warm weather and is caused by the ingestion of irritating food, exposure and poor hygienic surroundings. The amebic form is caused by a microorganism and is frequently followed by abscesses of the liver.

SIGNS AND SYMPTOMS: This disease usually begins gradually with loss of appetite, nausea, diarrhea and moderate fever running from 100° to 102° F, abdominal tenderness, with pain in the rectum and a constant desire to defecate. The stools at first contain fecal matter, but within twenty-four to thirty-six hours they become mucus in character with blood and pus. The duration of catarrhal dysentery is from one to two weeks, although sometimes it becomes chronic and the diarrhea persists for some weeks. Amebic dysentery is marked with less tenesmus and the stools are alive with the living organism. The duration of this form is from eight to ten weeks and twenty per cent. of the cases are claimed to be complicated by an abscess of the liver.

DIFFERENTIAL DIAGNOSIS: *Acute Catarrhal Enteritis* is differentiated from dysentery by the presence of undigested food in the stools and the absence of blood. Some cases of this disease are accompanied by an abdominal eruption resembling that of typhoid fever. Tenesmus is less marked in enteritis than in dysentery.

COMPLICATIONS: *Peritonitis* from extension of the in-

flammation involving the colon or the result of a perforation of an ulcer sometimes follows or complicates an attack of dysentery, when the period of disability,—if recovery takes place,—will be governed by the complication.

Hepatic Abscess is the most common complication of dysentery and generally follows the amebic form, being more common in the tropics. When an abscess of the liver results, disability is greatly prolonged.

HOUSE CONFINEMENT in all classes of risks in an ordinary attack of catarrhal dysentery generally lasts about 1 week. When the amebic form occurs, house confinement of from 4 to 8 weeks and sometimes longer is necessary.

TOTAL DISABILITY in preferred risks suffering from catarrhal dysentery lasts from 2 to 3 weeks when house confinement of one week has existed. Ordinary risks are totally disabled from 3 to 7 days longer than preferred risks under the same conditions. Amebic dysentery causes total disability of from 6 to 12 weeks and this time is increased for an indefinite period, often running beyond the limit of the policy when an abscess of the liver develops and requires an operation.

PARTIAL INDEMNITY FOR TOTAL DISABILITY if payable by the policy after the termination of house confinement, lasts from 1 to 2 weeks in preferred risks and from 2 to 3 weeks in ordinary ones, when an attack of catarrhal dysentery of average duration has been suffered.

EFFECTS: Individuals suffering from an attack of catarrhal dysentery of average duration, are insurable for all kinds of insurance from three to six months after complete recovery. If complications have been present with the attack, each case must be considered by itself, when life or health insurance will not be granted until after a longer time than the above. Accident insurance, however, in almost every case with a history of this disease can be issued as early as one month after the termination of the attack. When a history of amebic dysentery is obtainable life or health insurance would not be written until at least three to five years after the attack and an abscess of the liver or lungs had not supervened. It is questionable if accident insurance in such cases could be safely written until a year or more after complete recovery.

CATARRHAL ENTERITIS

SYNONYMS: Diarrhea; intestinal catarrh; inflammation of the bowels.

INFORMATION: Catarrhal enteritis is an acute inflammation of the mucous membrane of the small intestines. It is more common in children and during warm weather and is due to irritants which are swallowed, such as impure water, tainted meats, mineral poisons and toxins produced by the decomposition of foods.

SIGNS AND SYMPTOMS: Acute catarrhal enteritis commences with slight fever accompanied by pain and tenderness in the abdomen, and diarrhea, the stools being yellowish-green in color, offensive and mixed with undigested food. When the diarrhea becomes excessive the discharges contain no blood, but are known as "rice-water" stools. Weakness and emaciation follow excessive evacuations from the bowels; sometimes an abdominal eruption resembling that seen in typhoid fever is met with in these cases. The acute form of this disease may become chronic, in which event the diarrhea persists for a variable length of time.

DIFFERENTIAL DIAGNOSIS: *Peritonitis* should not be mistaken for intestinal catarrh, as this inflammation is not accompanied by diarrhea, but instead constipation is present, the abdomen is swollen and tympanitic, the patient lies on the back with the knees elevated, severe pain is present and the constitutional symptoms serve to indicate the disease.

Typhoid Fever in the early stage might be diagnosed for this acute disease, but this fever is preceded by prodromes, such as malaise, nose bleeding, headache, etc., the spleen becomes enlarged, rose spots appear and the characteristic temperature curve is present, together with the Widal blood reaction; all of the above being absent in catarrhal enteritis.

Dysentery is differentiated from diarrhea by the severe tenesmus, prostration, blood and mucus in the stools.

Ileocolitis is marked by more pronounced symptoms, such as tenderness and distention of the abdomen, high fever, rapid loss of weight, great prostration, with blood and mucus in greenish-yellow discharges.

HOUSE CONFINEMENT in mild cases in adults seldom lasts more than 3 to 5 days. If the attack has been very severe,

house confinement of from 7 to 10 days may be necessary in all classes of risks.

TOTAL DISABILITY of from 3 to 7 days is generally required by adults when a mild attack of intestinal catarrh occurs. If the diarrhea has been severe and much weakness and emaciation results, total disability of from 7 to 14 days may be required. Under the majority of industrial health policies, total disability with house confinement of seven days is necessary before the individual has a claim.

PARTIAL INDEMNITY FOR TOTAL DISABILITY if payable by the policy after the termination of house confinement, may last from 3 to 7 days; this time being required on account of weakness and debility from the constant discharges from the bowels.

EFFECTS: Individuals suffering from an attack of catarrhal enteritis are insurable for all kinds of insurance from three to six weeks after recovery is complete.

DIARRHEA

SYNONYMS: Enterorrhea; purging; alvine flux.

INFORMATION: Diarrhea is an acute condition which is usually a symptom of some other trouble. It results from a number of causes, such as an inflammation involving some part of the intestines, the ingestion of impure food and liquids, irritants taken into the stomach, such as poisons or foreign bodies and also follows the taking of cathartics. It is a symptom in certain diseases like typhoid fever, tuberculosis of the intestines and some of the tropical infections.

SIGNS AND SYMPTOMS: Acute diarrhea begins with pain in the abdomen which is distended by gas, and sometimes nausea with frequent evacuations of the bowels. These at first contain fecal matter and are offensive, but later consist only of liquids. Chronic diarrhea sometimes supervenes after an acute attack when the above signs and symptoms are present, together with weakness, emaciation and anemia.

DIFFERENTIAL DIAGNOSIS is important when diarrhea is existing and an insurance policy is carried by the individual. If the frequent discharges are due to local irritation and recovery soon takes place, it has no bearing on the desirability of the risk, but if the diarrhea is due to a systemic condition, such

as typhoid fever or is caused by tuberculosis of the intestines, it is highly important that the proper diagnosis be made. Insurance companies would not knowingly carry an individual who had suffered an attack of tuberculous diarrhea.

HOUSE CONFINEMENT does not often last more than from 1 to 3 days when the diarrhea is checked and the usual occupation resumed. If the condition is intractable and a chronic diarrhea results, house confinement of 1 to 2 weeks may follow on account of the weakened condition of the individual from the excessive evacuations of the bowels.

TOTAL DISABILITY seldom lasts over 2 to 3 days when an acute attack of diarrhea occurs and unless the policy pays for disability under seven days and house confinement is not necessary, such a person can have no claim against an insurance company. Chronic diarrhea may cause total disability of from 1 to 3 or 4 weeks in individuals who are not robust and whose occupation requires more or less manual labor. If this condition is due to a systemic disease like typhoid fever or tuberculosis, disability is controlled by the disease and not by the symptom.

PARTIAL INDEMNITY FOR TOTAL DISABILITY if payable by the policy after the termination of house confinement, is almost never claimed after cases of acute diarrhea, but when the disease becomes chronic and house confinement does not exist, from 1 to 2 or 3 weeks of this form of disability may be necessary in such cases.

EFFECTS: Individuals suffering from acute diarrhea are insurable for all kinds of insurance as soon as recovery takes place, but when the condition becomes chronic and persists for several weeks or months, life or health insurance would not be issued on such a person until three to six months after cessation of the excessive discharges and the individual has made a complete recovery. Accident insurance in such cases could be granted a short time after the diarrhea ceased.

GASTRALGIA

SYNONYMS: Gastrodynia; cardialgia; neuralgia of the stomach; stomach colic; spasm of the stomach.

INFORMATION: Gastralgia is a painful condition of the nerves of the stomach, the pain resembling that of neuralgia. It is more common in women and results from a number of causes,

among which may be mentioned reflex irritations, sexual excesses and mental overwork and worry. It is a common complication of certain diseases, such as cancer or ulcer of the stomach, neurasthenia and certain diseases resulting from uric acid diathesis.

SIGNS AND SYMPTOMS occur suddenly and consist of severe paroxysms of pain in the stomach which radiate to the chest and back. These paroxysms occur at irregular intervals and last from a few minutes to several hours, being accompanied by a feeling of faintness, cold extremities and intermittent pulse. Pressure over the abdomen or the taking of food sometimes relieves this condition.

DIFFERENTIAL DIAGNOSIS: *Angina Pectoris* might be mistaken for gastralgia, but in this disease the paroxysms usually come on at night, the pain being referable to the heart and radiating from that point to the neck and arm, rigidity of the body occurs and great fear of impending death is present. Arterio-sclerosis is usually found when attacks of angina pectoris occur.

Intercostal Neuralgia is characterized by pain along the intercostal nerves with spots of tenderness and in many cases the development of herpes over the inflamed nerve or nerves. Nausea and vomiting or symptoms referable to the stomach are absent in uncomplicated cases of intercostal neuralgia.

Gastric Cancer is manifested by pain, which is usually continuous and is aggravated by the swallowing of foods. The age of the patient together with the presence of perhaps a palpable tumor with more or less vomiting, hematemesis, emaciation and lactic-acid fermentation serve to make the diagnosis clear.

Gastric Ulcer is associated with localized, constant pain which is aggravated by the taking of food and sometimes relieved by vomiting, tenderness on pressure over the location of the ulcer and hematemesis exists.

Biliary Colic produces severe pain located in the right hypochondriac region and radiating to the right shoulder and scapula. This pain is often accompanied by fever and jaundice and sometimes the gall-bladder exists as a distinct tumor.

Renal Colic is characterized by intense shooting pains located over the affected kidney and following the ureter on the side involved; blood, mucus and particles of concretions are found in the urine.

COMPLICATIONS: *Gastralgia* often exists as a complication of some other disease and when found in this connection, disability is governed by the more important affection.

HOUSE CONFINEMENT in all classes of risks usually lasts from 2 to 4 days only, unless the attacks are of long duration and occur at short intervals, when from 5 to 7 days confinement to the house and sometimes to the bed may be necessary before the condition is controlled.

TOTAL DISABILITY of from 2 to 4 days is usually necessary in attacks of gastralgia in all classes of risks unless frequent attacks have occurred at short intervals and house confinement of from 3 to 7 days has existed, when total disability may last 1 week. Claims of over one week's duration for uncomplicated gastralgia seldom occur and if such a claim is made, the condition is usually complicated by some existing disease which would render the individual uninsurable.

PARTIAL INDEMNITY FOR TOTAL DISABILITY if payable by the policy after the termination of house confinement is rarely necessary.

EFFECTS: Individuals having suffered from one or more attacks of gastralgia which have been uncomplicated by any organic disease, are insurable for a life policy at almost any time, provided all other conditions are favorable. A health policy, however, would not be written with a history of repeated attacks of this disease unless a waiver was attached to the policy eliminating indemnity for disability following this condition. Accident insurance could be safely written at almost any time without regard to such a history.

ACUTE GASTRIC CATARRH

SYNONYMS: Acute indigestion; acute simple gastritis; sub-acute gastritis; gastric fever; bilious fever.

INFORMATION: Acute gastric catarrh is an acute catarrhal inflammation of the mucous membrane of the stomach and results from errors in diet, such as the taking of indigestible food or an excessive amount, poor mastication and edibles which are partially decomposed. The abuse of alcoholic liquors is perhaps the most common cause of this condition.

SIGNS AND SYMPTOMS begin with coated tongue, bad taste in the mouth, foul breath, loss of appetite, headache, mod-

erate fever, nausea and sometimes vomiting. In addition there is pain and tenderness of the abdomen with distention and in a number of cases at the termination of the attack, herpes appear about the mouth. Vertigo, with pain in the back of the neck is sometimes a distressing symptom.

DIFFERENTIAL DIAGNOSIS: *Typhoid and Remittent Fevers* may commence with symptoms referable to the stomach and a diagnosis of acute gastritis is made, but on account of the condition not getting better within a short time the proper diagnosis is soon ascertained.

Cerebral Disease may be thought to exist on account of the prominence of vertigo with pain in the back of the neck, but this symptom disappears on the institution of treatment for gastritis.

HOUSE CONFINEMENT in slight cases of gastric catarrh seldom exists, but if the attack is severe from 1 to 2 or 3 weeks may be required; if this condition follows a debauch, house confinement of from 3 to 7 or 10 days is sometimes necessary.

TOTAL DISABILITY does not often exist in acute, simple cases of gastric catarrh; in the majority of cases the occupation is followed while the condition exists. When this inflammation follows excessive drinking, total disability of from 1 to 2 or 3 weeks is sometimes required, but as an insurance policy does not pay indemnity for disability arising from over-indulgence of alcoholic liquors, it is important that the cause of acute gastritis and especially in cases that cause total disability, should be closely investigated and if found to result from excessive use of intoxicating liquors, such a claim would be rejected.

PARTIAL INDEMNITY FOR TOTAL DISABILITY if payable by the policy after the termination of house confinement, may last from 3 to 7 days in cases which have caused house confinement of seven to ten days; this time being necessary on account of the weakness that exists.

EFFECTS: When a history of repeated attacks of acute gastritis is secured, it is important to know if this condition is the beginning of tuberculosis of the lungs or exists in an individual who uses liquor to excess. In either case a life or health policy would not be granted. If it is found by a medical examination that the condition is due to neither of these causes, a life policy could be safely issued as soon as recovery is complete, but a health policy would not be granted without a waiver eliminating indemnity for disability from this disease. An accident pol-

icy can generally be sold to a person with such a history without reference to the disease, provided the moral hazard is not too great.

ACUTE TOXIC GASTRITIS

SYNONYM: Toxic gastritis.

INFORMATION: Acute toxic gastritis is an acute and violent inflammation of the membrane lining the stomach and is caused by the swallowing of poisons which irritate and corrode the internal surface of that organ. Poisons such as corrosive sublimate, carbolic acid, solutions of copper or arsenic and strong alkalies are the most frequent causes of this condition.

SIGNS AND SYMPTOMS are manifested at once or shortly after the swallowing of a corrosive poison and begin with intense, burning pain in the throat and stomach followed by nausea and persistent vomiting, the ejected matter first being the contents of the stomach and this is soon followed by clotted blood and shreds of mucous membrane, pain in the abdomen, marked thirst, and excessive purging usually exists in such cases. Shock is a prominent symptom and is followed by collapse and in many cases death, or a slow convalescence when symptoms referable to the kidneys and bowels complicate the condition.

DIFFERENTIAL DIAGNOSIS is extremely important when disability or death results from the taking of a corrosive poison. If the poison is taken accidentally and evidence to support this claim exists, an accident insurance policy would probably cover the disability or death which might result, while if a disability policy was carried, indemnity would not be payable if the poison was taken by intent. The character of the poison taken either accidentally or by intent is usually diagnosed by the stain or effects on the lips or in the mouth. Corrosive sublimate leaves a white glazed surface, carbolic acid a white corrugated appearance, nitric acid a yellow eschar, sulphuric acid a black or gray eschar, chromic acid a yellowish-white stain which in time becomes a grayish-brown eschar, while caustic potash causes a softening of the tissues with which it comes in contact.

COMPLICATIONS: *Acute Inflammation of the Kidneys* follows in almost every case of poisoning under the above conditions, provided the individual lives long enough for this to develop. When convalescence and recovery take place after the in-

gestion of a corrosive irritant poisoning and inflammation of the kidneys follows, house confinement and disability are greatly prolonged, not only by this condition, but also by the destruction of the mucous membrane of the esophagus, stomach and intestines which has come in contact with the poison.

Stenosis resulting from destruction of the tissues and resulting scars, always follows cases in which recovery takes place after the ingestion of an irritant poison, but in such cases this condition does not occur until some weeks have elapsed and generally does not cause disability which is covered by an accident or health policy.

HOUSE CONFINEMENT in cases of poisoning seldom lasts more than from 12 to 36 hours when a fatal termination occurs. If death does not follow the taking of such a poison and a slow convalescence is established, house confinement of from 2 to 3 or 4 weeks may be necessary.

TOTAL DISABILITY is not payable under an accident policy unless it is clearly proven that the poison was taken accidentally, when of course an insurance company would only be liable for indemnity according to the terms of the policy. If the poison was taken by intent, no company would pay disability or a death benefit in such a case unless the policy expressly provided a specific amount for such a contingency. Total disability is seldom long enough to constitute a claim under an accident policy when a poison has been swallowed accidentally, but if convalescence is established and the individual has a proper claim under the policy, total disability in such cases may last from 2 to 4 or 6 weeks and even longer.

PARTIAL DISABILITY is sometimes payable under an accident policy when disability results from the swallowing of a corrosive poison which has been taken by mistake and death has not ensued. In such cases, partial disability invariably follows a period of total and may last an uncertain and indefinite time on account of the destruction of the mucous membrane over which the poison has passed or degeneration of special organs, such as the kidneys, liver, etc.

EFFECTS: When an individual has taken a corrosive poison by mistake and has recovered, insurance of all kinds would be denied until at least one year or more after complete recovery had ensued and no complications resulted. If such a poison had

been taken by intent, all forms of insurance would be withheld from such a person.

GASTRIC ULCER

SYNONYMS: Peptic ulcer; perforating ulcer; chronic gastric ulcer; round ulcer of the stomach.

INFORMATION: A gastric ulcer is situated inside the stomach and is generally found on the posterior wall. It is a circumscribed ulceration with loss of tissue and is supposed to be due to the action of the hydrochloric acid in the gastric juice upon the mucous membrane which has been impaired from some

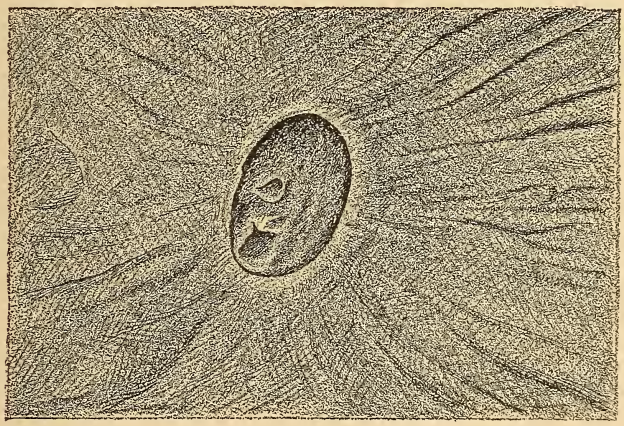


Fig. 105.—Gastric ulcer, showing erosion into a blood-vessel in the floor of the ulcer. (Bollinger).

cause or other. It is more common in women than in men and is usually a chronic condition and disability seldom results unless a perforation occurs or an operation is performed for the cure of this condition.

SIGNS AND SYMPTOMS: Ulcer of the stomach causes indigestion, with pain in the abdomen which is aggravated by the ingestion of food. Vomiting of the stomach contents and also blood which in most cases is expelled before it is acted upon by the gastric juice, is a common sign. Sometimes, however, it is retained long enough to become altered by the gastric juices and then it has a coffee-ground appearance. There is tenderness over the stomach and hyperacidity is almost invariably present. Frequent attacks of gastralgia occur when an ulcer is present.

DIFFERENTIAL DIAGNOSIS: *Cancer of the Stomach* is usually seen in persons past forty years of age; its course is rapid, severe pain is present with loss of weight and color, vomiting of blood which has been disintegrated and has the characteristic coffee-ground appearance occurs at irregular intervals and hydrochloric acid is absent, while lactic acid is present in large quantities.

Cholelithiasis is characterized by pain in the right hypochondrium occurring suddenly and radiating towards the right shoulder and is not associated with the taking of food; tenderness and rigidity over the gall-bladder are present and moderate fever, with jaundice sometimes occurs.

Chronic Gastritis is not uncommonly diagnosed when a gastric ulcer exists, but in this disease there is a history of over-indulgence in alcoholic liquors or excessive over-eating and persistent indigestion covering a number of months or years with slight pain in the epigastrium which is not aggravated by the taking of food and vomiting is unaccompanied by blood.

Gastralgia is marked by paroxysms of intense pain which occur at irregular intervals and are not connected with the ingestion of food. Absence of vomiting and amelioration of the pain by pressure is noticed and in some instances when food is swallowed. Hematemesis or hyperacidity is not present in gastralgia.

COMPLICATIONS: *Perforation of the Stomach* is the most common complication and when this occurs the signs and symptoms of shock are soon followed in the majority of cases by evidence of peritonitis. In such cases disability results at once and persists until death terminates the case or an operation is performed for the cure of the condition.

Hemorrhage often accompanies a perforation and when excessive may cause a fatal termination unless an immediate operation is performed.

HOUSE CONFINEMENT seldom occurs in cases of ulcer of the stomach unless some of the complications ensue or a voluntary operation is performed for the cure of this condition. If a perforation or hemorrhage takes place death may result within from 3 to 10 days; during which time house confinement exists. When an operation is necessary on account of a complication, house confinement lasts from 2 to 4 or 6 weeks and sometimes longer on account of the debilitated condition of the individual

before an operation is rendered obligatory by a perforation or large hemorrhage.

TOTAL DISABILITY is rarely payable in cases of ulcer of the stomach unless a complication ensues or an operation is voluntarily undergone. If a perforation with peritonitis occurs and death follows within a short time, total disability does not often last more than 1 to 2 weeks. If this complication arises and an operation is performed it is usually done at once, when total disability lasts from 4 to 6 weeks and sometimes longer.

PARTIAL INDEMNITY FOR TOTAL DISABILITY if payable by the policy after the termination of house confinement, is sometimes required when an operation has been rendered necessary by a complication arising in connection with this disease and in such cases from 2 to 4 or 6 weeks may be demanded on account of the poor physical condition of the individual after the operation.

EFFECTS: When a gastric ulcer is suspected as existing in an individual, such a person is not insurable for life or health insurance, although accident insurance can generally be written without any increased hazard. If a gastric ulcer has been voluntarily removed by an operation or on account of perforation and recovery ensues and is complete, life or health insurance can be written from four to eight months after complete recovery, if during this time all evidence of indigestion and the signs and symptoms of the former condition have disappeared.

INTESTINAL OBSTRUCTION

SYNONYMS: Intestinal stricture; intestinal occlusion; strangulated hernia; obstruction of the bowels; invagination; ileus.

INFORMATION: Intestinal obstruction results from causes which produce a sudden or gradual closing of the intestinal canal. It may result from strictures in the bowel itself, strangulations which are caused by strictures within the abdominal cavity, invagination, twisting of the intestines, pressure by growth within the abdomen and accumulations of hardened feces or foreign bodies in the intestines, paresis and congenital malformation.

SIGNS AND SYMPTOMS are sudden or gradual in onset according to the cause of the obstruction. When it is acute, ab-

dominal pain comes on suddenly and at first in paroxysms, but later the pain is continuous. Constipation is present, vomiting begins, first the contents of the stomach and later regurgitation of the intestinal matter into the stomach occurs and is ejected by the mouth, attended with signs and symptoms of collapse. If the obstruction is of long duration and gradually closes the lumen of the bowel, the symptoms are slow in onset, consisting of constipation which becomes more marked as the stricture contracts, pains in the abdomen with distention and impaired health. If the obstruction is due to a stricture of the bowels, the discharges are ribbon-shaped and sometimes associated with blood and mucus.

DIFFERENTIAL DIAGNOSIS: *Appendicitis* may be diagnosed as intestinal obstruction, but in the former there is a fixed area of tenderness over McBurney's point with swelling; vomiting is never fecal in character and usually subsides within twenty-four hours, while the passage of gas per rectum and movement of the bowels is always possible.

Peritonitis is sudden in onset following a chill, with elevated temperature, distention of the abdomen and rigidity of the abdominal walls, the characteristic position is assumed on the back with the limbs drawn up and nausea and vomiting follow, the latter, however, is not of a stercoraceous character.

Catarrhal Enteritis in the early stages may be mistaken for obstruction of the bowels. In this condition, however, the diarrhea which is present becomes more marked as the disease progresses, absolutely eliminating any obstruction.

Hepatic Colic sometimes resembles obstruction of the bowels, but when pain is caused by the passage of one or more gallstones, it is agonizing and is located in the region of the gallbladder and radiates over the chest and shoulder. Nausea and vomiting occur, but of the latter, the contents of the stomach only are expelled. Jaundice is present and movement of the bowels takes place.

Renal Colic is best diagnosed by the situation of the pain in the back which is referred in the male to the corresponding testicle. It terminates suddenly as the stone passes into the bladder and is accompanied by hematuria, albuminuria and movement of the bowels.

Acute Hemorrhagic Pancreatitis is sometimes mistaken for intestinal obstruction. This condition, however, produces pallor of the face, prostration, collapse and evidence of a tumor in the

left upper part of the abdomen, while the passage of gas or movement of the bowels occurs naturally.

COMPLICATIONS: *Peritonitis* may result from a strangulation of the bowel which becomes ruptured or gangrenous from the constriction. In such cases, death is almost invariable unless an immediate operation is performed for the cure of this condition, when disability is prolonged as the result of the operation.

HOUSE CONFINEMENT in all classes of risks lasts from 1 to 2 weeks when recovery follows without an operation. If death occurs, it generally takes place within ten days from the beginning of absolute obstruction. If an operation is performed to relieve the obstruction, house confinement lasts from 2 to 4 weeks after the date of operation and this is usually preceded by about 1 week of confinement to the house and bed.

TOTAL DISABILITY in cases of acute intestinal obstruction lasts from 1 to 2 weeks, when relief follows as the result of medical treatment or if death occurs, total disability is usually the same length of time; namely, 1 to 2 weeks. When an operation is performed, total disability lasts from 4 to 6 weeks from the date of the beginning of disability.

PARTIAL INDEMNITY FOR TOTAL DISABILITY if payable by the policy after the termination of house confinement, generally requires from 1 to 2 weeks, this time being necessary before the occupation can be resumed.

EFFECTS: When a history of obstruction of the bowels exists in any case, it is necessary that the exact cause be known before an opinion as to the insurability of the risk can be given. If the obstruction has been due to a stricture in the wall of the bowel and this part has been removed and no evidence of any further trouble of the same kind is discovered at the time of the operation, life or health insurance can be issued from two to three years after recovery is complete. Should the obstruction have been due to a strangulation which was caused by adhesions within the abdominal cavity, it is questionable if a life policy could be issued on such a risk, but a health policy could be written with a waiver eliminating indemnity for disability from this condition. Invagination or intussusception is most common in children and if relieved by an operation when it occurs in an adult, such a history would have little bearing on the insurability for life or health insurance, if two to three years have elapsed after the operation. The same also applies to a twisting or rotation of the bowel. If

the operation resulted from accumulations within the intestines due to irregular living or obstinate constipation, other conditions would have to be considered before a life policy could be written, but a health policy could be issued with a waiver eliminating disability when caused by obstruction of the bowels. If pressure by a tumor or foreign growth within the abdominal cavity causes this condition, the fact that intestinal obstruction occurred would have no bearing on the insurability of the risk; it being necessary to consider the cause of the obstruction in the granting of a life or health policy. Accident insurance can generally be safely written on individuals with a history of obstruction of the bowels from three to six months after complete recovery, provided the other history is unobjectionable.

PROCTITIS

SYNONYMS: Rectitis; catarrh of the rectum.

INFORMATION: Proctitis is an inflammation of the mucous membrane of the rectum and anus and is most commonly caused by constipation, exposure resulting from the sitting on damp ground or stone steps, constant use of enemata or purgatives, hemorrhoids and diseases of the liver. When a proctitis is alleged as the cause of disability, it is important to know if a fistula developed, as in the majority of cases this condition is tuberculous in origin and if this disease exists, it has been present for some time and the individual is not insurable for any kind of a policy.

SIGNS AND SYMPTOMS: Proctitis usually begins with headache, moderate fever and general malaise accompanied by a burning pain in the rectum and a constant desire to evacuate the bowels. The stools are either hardened feces which cause intense pain as they are discharged or mucus in character with blood or blood and pus. When a movement occurs, there is often a prolapse of the lower part of the rectum.

DIFFERENTIAL DIAGNOSIS: *Proctitis* may be seen in conjunction with a carcinoma of the rectum; in which case there is severe pain, emaciation, loss of color and strength.

COMPLICATIONS: *Abscesses of the Liver* are sometimes complicated with proctitis; when the disability is governed by the more serious disease.

Periproctitis or inflammation around the anus results from

the above conditions and is often complicated with fistulæ of various kinds. When these occur, disability is greatly prolonged by the complication even after the original disease is cured.

Localized Peritonitis may result from the inflammation involving the rectum, when disability usually results. If the peritonitis is due to a perforation in the wall of the rectum and an abscess follows and discharges through this canal, disability is greatly prolonged.

HOUSE CONFINEMENT in uncomplicated cases of proc-

FIG. 106.—COMPLETE PROLAPSE OF THE RECTUM. (Eisendrath).
L, Depression corresponding to lumen of rectum; PM, prolapsed mucous membrane of rectum.

titis does not often follow, for the reason that it exists at irregular intervals and lasts a day or part of a day only. When this inflammation is complicated by a more serious disease house confinement may be present, but in such cases it is controlled by the complication rather than the proctitis.

TOTAL DISABILITY in uncomplicated cases of this inflammation depends on the course and severity. Usually, however, the disability is not continuous and therefore it is not cov-

ered by a health or disability policy. If the inflammation becomes so severe as to cause house confinement, total disability of 1 to 2 weeks may result.

PARTIAL INDEMNITY FOR TOTAL DISABILITY if payable by the policy after the termination of house confinement, when necessary after a severe attack of this inflammation in which house confinement of a week or more has been present, may require from 1 to 2 or 3 weeks of this form of disability.

EFFECTS: Individuals having suffered from an uncomplicated attack of proctitis are insurable for all forms of insurance from two to four months after the condition has been cured. If the inflammation was due to or complicated by an organic disease of the rectum or surrounding tissue, all forms of insurance would be denied such a person. When a proctitis results in a fistula, life, accident or health insurance cannot be issued until at least six months after the cure of this complication and not until a medical examination has been made and the individual shown to have fully recovered.

CHAPTER XVII

DISEASES OF THE LIVER

ABSCESS OF THE LIVER

SYNONYMS: Acute hepatitis; parenchymatous hepatitis; suppurative hepatitis.

INFORMATION: Abscess of the liver may be single or multiple and when found to be present are usually situated in the right lobe. They are caused by micro-organisms which accompany diseases of the intestines and result from septic emboli that are carried to the liver tissue from a suppurating focus in another part of the body. Traumatism is rarely the cause of an abscess in this location.

SIGNS AND SYMPTOMS are usually obscure and the diagnosis of this condition is extremely difficult. When an abscess of the liver exists, that organ is enlarged, tender and painful, and if the pus is encapsulated near its surface, the skin in this situation shows redness and edema and in some cases fluctuation can be detected. The enlargement may also cause bulging beneath the costal arch. Intermittent or remittent fever with chills, sweating, jaundice and symptoms referable to the nervous system are present when this condition exists An abscess of the liver may evacuate itself into the chest or abdominal cavity, stomach or intestines, producing characteristic symptoms.

DIFFERENTIAL DIAGNOSIS: *Impacted Gall-stones* may be existing and show a history of long standing. This condition is characterized by pain accompanied by fever of an intermittent or remittent type and occurring at irregular intervals. Jaundice is present and becomes more marked as the paroxysms increase in number and the longer the impaction is present.

Cancer of the Liver is diagnosed by the history, age, evidence of a nodular swelling, loss of weight and color, jaundice, weakness and in some cases involvement of other organs.

Hydatid Cysts usually occur in isolated quarters and this condition is rare in America. When it does exist, a large number of cysts are formed, irregular enlargement of the liver follows, fluc-

tuation is detectable and on aspiration a fluid containing the characteristic hooklets is obtained.

COMPLICATIONS: *Pleurisy* and *Pneumonia* may follow an abscess of the liver which ruptures into the pleural cavity. In such cases, disability is very uncertain and greatly prolonged.

Peritonitis either general or localized may follow the rupture of an abscess of the liver into the peritoneum, stomach or intestines.

HOUSE CONFINEMENT is extremely uncertain and depends on the location of the pus, the amount of tissue involved,

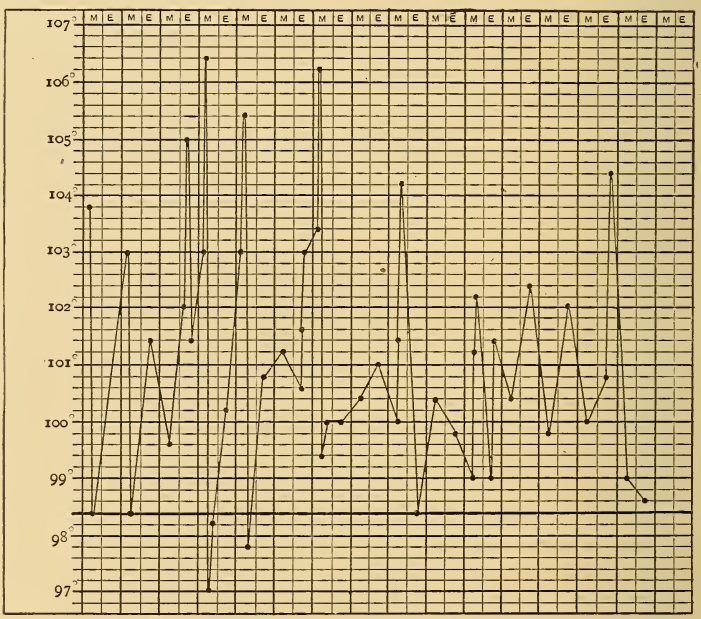


Fig. 107.—Intermittent fever in abscess of the liver. (Musser).

whether the abscess is allowed to rupture spontaneously or is evacuated by an operation. If a single small abscess exists and the pus is evacuated by nature or an operation is performed at an early date, house confinement of from 2 to 3 weeks only may be necessary. If a larger abscess is formed it may require confinement to the house and bed from 4 to 6 or 8 weeks, this time being governed by the above enumerated conditions. When an operation is performed, house confinement is prolonged from the date of operation from 3 to 6 weeks.

TOTAL DISABILITY is also uncertain when an abscess of

the liver exists and lasts from 4 to 10 or 16 weeks. The longer time often being necessary for abscesses of this organ occurring in the tropics.

PARTIAL INDEMNITY FOR TOTAL DISABILITY if payable by the policy after the termination of house confinement may require from 4 to 8 or 12 weeks and sometimes longer; this depending on a number of conditions which govern the length of disability and the resulting physical condition.

EFFECTS: Individuals who have spent more or less time in the tropics and suffered from an abscess of the liver are not insurable for a life or health policy unless five to ten years or more have elapsed without any symptoms referable to this trouble. When a small abscess existed and was evacuated early, such a person can sometimes be insured for a life or health policy from one to two or three years after the termination of this condition. Accident insurance can be issued from six to twelve months after complete recovery follows from an abscess of the liver.

CHOLELITHIASIS

SYNONYMS: Gall-stones; biliary calculi; hepatic calculi; hepatic colic.

INFORMATION: Biliary calculi are much more common in females than in males and occur more frequently after forty years of age. They vary in size and shape, from that of a small grain of sand to that of a large walnut and may be found in any number from one to several hundred; usually being light yellow or dark green in color and composed chiefly of cholesterin with some bile-pigments and liver-salts. Gall-stones are said to result from a number of causes, the most probable being the action of a micro-organism on the gall-bladder, which causes an over-secretion and the formation of stones. They are also seen in those whose habits of life are sedentary.

SIGNS AND SYMPTOMS: An attack of biliary colic begins suddenly and is caused by the passage of one or more gall-stones from the gall-bladder into the cystic duct where impaction occurs but sometimes this condition takes place in the lower part of the common duct. During the passage of a stone or stones intense pain exists over the region of the liver and radiates into the right chest and shoulder of the same side. Tenderness is

complained of when pressure is made over the gall-bladder, moderate fever exists with nausea and vomiting, feeble pulse, cold perspiration and an anxious expression of the face. Jaundice more or less marked may follow an attack of biliary colic, but is not always constant. As soon as the calculus reaches the intestines, all signs and symptoms of the pain cease and the stone is later found in the stools. Attacks of biliary colic last from a few

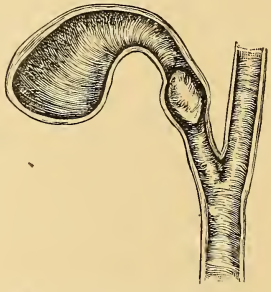


Fig. 108.—Gallstone in cystic duct. (Musser).

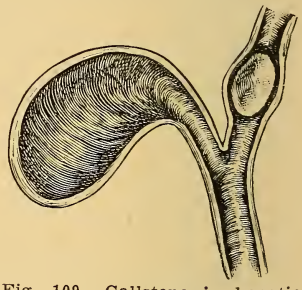


Fig. 109.—Gallstone in hepatic duct. (Musser).

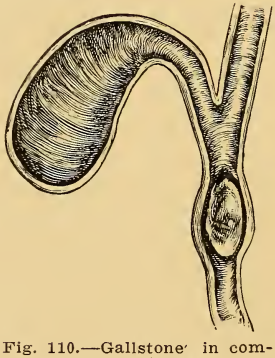


Fig. 110.—Gallstone in common duct. (Musser).

minutes to several hours and sometimes even extend over several days.

DIFFERENTIAL DIAGNOSIS: *Gastralgia* is diagnosed by the history of repeated attacks, with absence of jaundice or the finding of gall-stones in the stools. The pain is in the region of the stomach and is relieved by pressure or the swallowing of food and occurs more often in individuals of a neurotic temperament.

Ulcer of the Stomach shows a history of long standing with pain in that organ which radiates to the back and is increased by

eating; vomiting of blood is frequent and hyperacidity of the gastric contents is constantly present.

Intestinal Colic results from the ingestion of indigestible food, over-eating or over-indulgence in alcoholic liquors and is characterized by colicky pains around the umbilicus, together with distention of the abdomen by gas and borborygmi.

Renal Colic is marked by pain in the region of the kidneys which radiates along the ureter and into the loins. Jaundice is absent, but pus and blood, together with albumin are found in the urine which is passed frequently.

COMPLICATIONS: *Localized Peritonitis* almost invariably complicates an attack of biliary colic and this is especially true if the condition remains for any length of time. This complication, however, is usually so slight that it seldom causes any disability or prolongation of that resulting from the primary inflammation.

HOUSE CONFINEMENT seldom lasts more than 1 to 2 days when a single stone is passed. If a number are expelled, attacks of biliary colic may occur at irregular intervals but close together, when house confinement of 1 to 2 weeks may result. Usually, however, house confinement is not long enough to be covered by a health policy except when indemnity is paid for less than seven days.

TOTAL DISABILITY under the majority of health policies does not follow when gall-stones are passed, unless a number of attacks succeed the first one, when total disability of from 1 to 2 or 3 weeks may be required. The latter part of this time being necessary on account of the weakened condition of the individual which follows from the repeated attacks of severe pain.

PARTIAL INDEMNITY FOR TOTAL DISABILITY if payable by the policy after the termination of house confinement is not often demanded and when required, from 1 to 2 weeks are generally sufficient.

EFFECTS: When a history of biliary colic exists, health insurance would not be granted unless a waiver was placed on the policy eliminating indemnity for disability due to this condition, and in such cases, a health policy would not be issued until at least six months had elapsed after the last attack. The issuance of a life policy would depend on a number of conditions and would not be issued until six to twelve months had passed after the last attack and the medical examination had shown all other

conditions favorable. Accident insurance could be safely granted from three to six months after the termination of an attack, provided the risk be normal in all other respects.

CARCINOMA OF THE LIVER

SYNONYMS: Cancer of the liver; hepatic cancer.

INFORMATION: Carcinoma of the liver occurring as a primary cancer is rarely seen; the more usual form being known as the secondary cancer and this follows when such a morbid growth exists in other parts of the body. It is more common in men than in women and usually occurs after forty years of age and is said to be hereditary, due to irritations from gall-stones and in rare instances from traumatism.

SIGNS AND SYMPTOMS: Cancer of the liver develops slowly and is preceded by a history of chronic indigestion and constipation. The liver becomes enlarged and painful and small nodules develop on the surface. Jaundice is present and cachexia soon appears.

DIFFERENTIAL DIAGNOSIS: *Syphilitic Enlargement* of the liver is preceded with a history of infection in which the prominent signs of this disease show themselves. It may occur at any stage and does not produce cachexia, such as results when cancer exists. Localized pain is complained of and a moderate elevation of temperature exists.

Abscess of the liver is diagnosed from cancer by the history, together with the hectic temperature which exists in all such cases and an exploratory incision or puncture serves to make the diagnosis clear.

Cirrhosis of the liver in one of the various forms may be mistaken for a cancer of this organ, but in cirrhosis a history that would produce this condition usually exists. It occurs at all ages and when present, the characteristic cachexia seen in cancer of the liver does not occur.

COMPLICATIONS: *Cancer* of the liver usually exists as a complication and follows the involvement of some other organ or part of the body. In such cases it is a secondary infection and usually prolongs a pre-existing disability.

HOUSE CONFINEMENT does not often occur in this disease until near the termination of the life, and when it once begins it almost invariably persists until death ends the case. In

such cases it is uncertain and may last from 1 to 3 weeks only, again from 2 to 3 months or more.

TOTAL DISABILITY: Cancer of the liver almost always causes a fatal termination within one year from the time it is diagnosed, but total disability does not usually begin until near the end of the life of the individual, when it may last from 1 to 2 months only or by beginning early in the disease persist as long as 6 to 8 months.

PARTIAL INDEMNITY FOR TOTAL DISABILITY if payable by the policy after the end of house confinement, is never required in such cases, for the reason that when house confinement once begins it is constant until the case terminates by death.

EFFECTS: Individuals with a history of an obscure trouble of the liver which may or may not be a cancer of this organ are not insurable for any kind of a policy while an uncertain diagnosis exists. If it is shown after three to five years that a cancer has not been present and all other things are equal, life or health insurance may be considered, but the issuance of a life, health or accident policy would depend upon the results of a medical examination.

CIRRHOSIS OF THE LIVER

SYNONYMS: Sclerosis of the liver; interstitial hepatitis; hardening of the liver; gin-drinkers' liver; hob-nailed liver.

INFORMATION: Cirrhosis of the liver is a slow, chronic inflammatory process, characterized by a hyperplasia of the connective tissue which results in hardening and contraction and a destruction of the liver-cells which secrete the bile. It is more common in males than in females, usually occurs during middle life and most frequently results from the continued and prolonged use of alcoholic liquors. It is also caused by chronic diseases such as syphilis, tuberculosis, malaria and chronic diseases of the heart and kidneys.

SIGNS AND SYMPTOMS are divided by most writers into two stages; the first stage generally persists for months or years and during this time there is coated tongue, loss of appetite, dyspepsia with flatulency, nausea, vomiting and constipation. When these symptoms are complained of by an individual who is constantly drinking to excess, a beginning hardening of the liver

would be suspected. The symptoms of the second stage are a continuation of those seen in the early stage and consist of chronic dyspepsia, with enlargement of the spleen and superficial veins of the abdomen together with dropsy, some pain over the region of the liver, slight jaundice, hemorrhoids and loss of flesh and strength.

DIFFERENTIAL DIAGNOSIS: *Chronic Peritonitis* which has existed for some time and is accompanied by an effusion may resemble cirrhosis of the liver. When peritonitis of this form exists, it is usually due to tubercles scattered throughout the peritoneum and the diagnosis is made by the ascites which develops rapidly, the absence of jaundice, changes in the size of the liver and by an exploratory incision which makes the diagnosis clear.

COMPLICATIONS: *Cirrhosis* of the liver is almost invariably complicated by diseases of the heart, blood vessels and kidneys. Tuberculosis of the peritoneum is also a common complication and almost any other chronic disease may be suspected.

HOUSE CONFINEMENT rarely occurs in those suffering from cirrhosis of the liver until that organ has become so badly diseased that its functional activity is almost ended. In such cases, house confinement marks the termination of the illness and is continuous or it exists from 1 to 2 or 3 days at a time, when the individual is sufficiently recovered by rest and diet to be able to leave the house for a few days when house confinement again occurs. When it is present as a continued period, it may be as short as from 2 to 7 days only; other times from 2 to 6 or 8 weeks may be necessary before death occurs.

TOTAL DISABILITY does not ensue until near the termination of the disease. This period may be short, sometimes lasting only from 2 to 7 or 10 days, at other times when house confinement is not continuous, total disability may last from 1 to 2 or 3 months.

PARTIAL INDEMNITY FOR TOTAL DISABILITY if payable by the policy after the termination of house confinement is not necessary in these cases as recovery never occurs.

EFFECTS: If the diagnosis of cirrhosis of the liver is made in an individual, that person is not insurable for any kind of insurance, and if a policy is carried by such a person and is of recent issue, it is almost proof positive that it was secured by misrepresentations.

CONGESTION OF THE LIVER

SYNONYMS: Biliousness; torpid liver; hyperemia of the liver.

INFORMATION: Congestion of the liver may be active or passive; the active form causing short periods of disability. It is due to over-indulgence in eating and drinking of alcoholic liquors, exposure to high atmospherical or artificial heat, habitual constipation and malaria.

SIGNS AND SYMPTOMS: Active hyperemia of the liver generally begins rapidly with headache, feverishness, flatulency, nausea, anorexia, constipation and a feeling of weight and soreness over the right hypochondriac region; slight jaundice may also appear. Passive hyperemia is gradual in onset with practically the same symptoms, consisting of pain in the hepatic region, jaundice and chronic indigestion. Percussion shows an increased area of dullness.

DIFFERENTIAL DIAGNOSIS: *Catarrhal Jaundice* is usually mistaken for active congestion of the liver, but in this disease the history, together with pronounced gastro-intestinal symptoms and jaundice serve to make the diagnosis.

Obstructive Jaundice in the early stages is sometimes diagnosed for acute hyperemia of the liver, but in this condition jaundice is slight at first and gradually becomes more marked until the skin is stained a deep yellow. Mental depression exists with a slow pulse and slightly subnormal temperature and later itching of the skin follows, and in severe cases delirium and coma sometimes occur.

HOUSE CONFINEMENT rarely lasts more than from 3 to 7 days when the inflammation subsides in acute hyperemia of the liver and the occupation can be resumed. Passive hyperemia seldom causes house confinement, except when it is a complication of some other disease.

TOTAL DISABILITY in cases of acute congestion of the liver usually lasts from 5 to 10 days, when all classes of risks are able to resume the usual duties of the occupation. Passive congestion unless complicated by some other disease almost never causes total disability.

PARTIAL INDEMNITY FOR TOTAL DISABILITY if payable after the termination of house confinement is rarely necessary.

EFFECTS: Individuals having suffered from an attack of active congestion of the liver are insurable for any kind of a policy from three to six months after complete recovery. When passive congestion has existed and is due to some intercurrent disease, insurance of all kinds must be denied a person suffering with such a condition.

CATARRHAL JAUNDICE

SYNONYMS: Icterus; jaundice; catarrhal angiocholitis; catarrhal hepatitis; catarrh of the bile-ducts.

INFORMATION: Catarrhal jaundice is an acute inflammation of the mucous membrane lining the bile ducts and is caused by exposure, over-eating and drinking, irritation by gall-stones, some of the infectious fevers, but most commonly it is due to an extension of an inflammation of the duodenum.

SIGNS AND SYMPTOMS: This disease usually begins by loss of appetite with coated tongue, foul breath, pain over the stomach, slight fever, nausea, vomiting and diarrhea. These are followed in a few days by itching of the skin which has become harsh and dry, constipation with clay-colored stools, distention of the abdomen by gas and a yellowish discoloration of the conjunctiva of the eyes, where it first appears and gradually extends over the body until the whole skin takes on a yellow-greenish hue. The urine is of high specific gravity, dark in color and contains the coloring matter of the bile.

DIFFERENTIAL DIAGNOSIS: *Jaundice* must be diagnosed from other forms of discoloration which resemble it.

Addison's Disease is extremely rare and is characterized by a bronzing of the skin with a pigmentation of the mucous membrane and pronounced gastric symptoms. Discoloration of the conjunctiva of the eyes and bile in the urine is absent in this disease.

Chlorosis occurs almost exclusively in women between fifteen and twenty-five years of age. The greenish discoloration of the skin in some resembles jaundice, but is unaccompanied by a staining of the conjunctiva or the presence of bile in the urine.

HOUSE CONFINEMENT in an average case of catarrhal jaundice lasts from 2 to 3 weeks, but this time is increased about 1 week when the disease terminates during inclement weather. When an especially severe attack has been suffered, house confine-

ment of from 3 to 4 and even 6 weeks may sometimes be necessary.

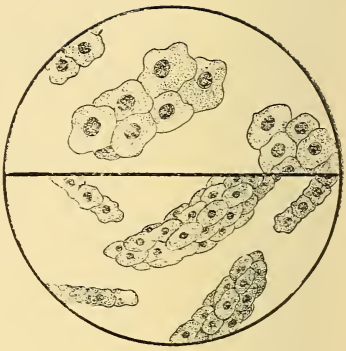
TOTAL DISABILITY lasts from 2 to 4 weeks in the majority of cases, although this period may be increased from 1 to 3 weeks when an especially severe inflammation has existed. It is not necessary that total disability persists until all evidence of discoloration in the skin disappears, as this may remain some time after all disability is ended.

PARTIAL INDEMNITY FOR TOTAL DISABILITY if payable by the policy after the termination of house confinement, usually demands 1 to 2 weeks in all classes of risks.

EFFECTS: Individuals with a history of an attack of catarrhal jaundice which has subsided without any complications and was not due to the passage of stones or any organic disease in the region of the gall-bladder, could be insured for life or health insurance from three to six months after complete recovery. If a history of repeated attacks of this inflammation exists, life or health insurance would not be issued on such a person. Accident insurance can be safely written from one to two months after recovery from the first attack, but it is questionable if an insurance company would write accident insurance on any one who had suffered disability a number of times from this condition.

PLATE XIII

1. Blood casts, some composed of disintegrated red blood-cells.



2. a, Squamous epithelium from the urine. b, Epithelial casts.

3. Hyaline casts.

4. Coarse aad fine granular casts.

5. Cylindroids.

6. Waxy casts.

Various Forms of Urinary Casts.
(Salinger and Kalteyer.)

CHAPTER XVIII

DISEASES OF THE KIDNEYS AND BLADDER

ACUTE PARENCHYMATOUS NEPHRITIS

SYNONYMS: Congestion of the kidneys; acute Bright's disease; acute tubular nephritis; acute desquamative nephritis; acute croupous nephritis.

INFORMATION: Acute parenchymatous nephritis is an acute inflammation of the epithelium of the tubules of the kidneys and is more common in the young than in the aged. It is caused by exposure to cold and wet and follows some of the acute infectious diseases. It is also due to the elimination of poisons through the kidneys and sometimes is seen in conjunction with severe burns which involve a large surface of the skin. It is rarely caused by blows and injuries to the back.

SIGNS AND SYMPTOMS: Severe attacks of this disease usually develop suddenly with headache, a dull pain in the back over the region of the kidneys, slight fever with nausea and persistent vomiting. The skin is dry and harsh, pulse quick and tense and dyspnea is present. Dropsy begins in the face and gradually becomes general and may be followed at any time by convulsions and uremic coma. The urine is of high specific gravity, scanty, of a smoky color and contains blood, epithelium, albumin, hyaline, and epithelial casts with crystals of various kinds.

DIFFERENTIAL DIAGNOSIS: An attack of acute parenchymatous nephritis must be differentiated from an acute exacerbation of a chronic parenchymatous nephritis and this diagnosis is made by the history, together with an examination of the urine which shows fatty casts when a chronic parenchymatous nephritis is existing and is complicated by an acute exacerbation.

Albuminuria which occurs in conjunction with some of the acute diseases such as diphtheria, erysipelas, etc., must not be mistaken for an acute attack of parenchymatous nephritis. When albuminuria occurs alone and an acute parenchymatous inflam-

mation is not present, it exists as a complication of some acute disease or is a chronic condition.

COMPLICATIONS: *Pericarditis* is frequently seen as a complication of acute nephritis and comes on in an insidious manner, being diagnosed by the heart symptoms which are produced by this disease and described under Pericarditis. The period of disability is prolonged when this complication exists.

Pneumonia and Pleurisy may be seen in conjunction with an attack of acute parenchymatous nephritis; some cases presenting all three diseases at the same time. When an inflammation involving the lungs or pleura is present, the signs and symptoms referable to such diseases present themselves, and the disability is increased according to the complication.

Peritonitis, due to an extension of the inflammation involving the kidney may sometimes be seen in an attack of acute nephritis. Unless the peritonitis becomes general, the localized inflammation usually subsides by the time the acute nephritis is ended and disability is not prolonged.

Uremia is perhaps the most common complication of acute nephritis and when it occurs the period of disability is increased. For the signs and symptoms of this complication see description of Uremia.

HOUSE CONFINEMENT lasts from 1 to 2 weeks in mild cases of acute parenchymatous nephritis in all classes of individuals. If the attack is a severe one, confinement to the bed and house of from 3 to 4 or 5 weeks may be necessary and this period is sometimes prolonged from 3 to 7 days if the house confinement terminates during cold and inclement weather. When acute nephritis complicates an attack of some of the acute infectious diseases, house confinement is generally prolonged from 1 to 3 weeks according to the severity of the complication.

TOTAL DISABILITY in mild cases which are uncomplicated with any other disease, lasts from 2 to 3 weeks. If the attack is severe and house confinement is lengthened on account of the weather conditions, total disability may last from 4 to 5 or 6 weeks.

PARTIAL INDEMNITY FOR TOTAL DISABILITY if provided by the policy after the termination of house confinement, does not often require more than 1 to 2 weeks when the individual will have sufficiently recovered to resume part of the occupation.

EFFECTS: An attack of acute parenchymatous nephritis renders an individual uninsurable for life or health insurance until three to six months have elapsed after the termination of the disease, and the medical examination shows a complete recovery with a normal condition of the urine. Chronic parenchymatous nephritis or chronic interstitial nephritis does not often follow an acute attack of this form of inflammation of the kidneys, but insurance companies are generally very careful about accepting applicants for life or health insurance until it is positively known that a complete and permanent recovery has been effected. If the inflammation has been due to the taking of poisonous substances by intent, such a person would thereafter be uninsurable for all kinds of insurance. Accident insurance can be safely written from one to two months after recovery is said to be complete.

CHRONIC PARENCHYMATOUS NEPHRITIS

SYNONYMS: Chronic Bright's disease; chronic nephritis; chronic tubular nephritis; chronic croupous nephritis; chronic catarrhal nephritis; chronic albuminuria; large white kidney.

INFORMATION: Chronic parenchymatous nephritis is a chronic inflammation of the secreting portion of the kidneys and is more common in the male adult between twenty-five and forty years of age. It is caused by habitual exposure, alcoholism, syphilis, chronic diseases, poisoning from mineral substances, protracted suppuration and in rare instances, the acute form becomes chronic.

SIGNS AND SYMPTOMS develop so gradually that the disease is not recognized until dropsy appears under the eyes and gradually extends over the body. It is accompanied by digestive disturbances, weakness, anemia, dyspnea, cardiac palpation, headache, vertigo and impairment of sight. The urine is scanty, of low specific gravity, contains much albumin with hyaline and large granular casts and sometimes, oil globules, fatty casts and red blood cells are found. This disease is frequently first diagnosed by an insurance examiner causing the rejection of an applicant on account of albumin in the urine, when such a condition has not even been suspected.

DIFFERENTIAL DIAGNOSIS: *Chronic Parenchymatous Nephritis* must be differentiated from the acute form and also from chronic interstitial nephritis and the diagnosis is best made

from the history of the disease and an examination of the urine. In acute and chronic parenchymatous nephritis, the amount is scanty, while in chronic interstitial nephritis a large amount is voided daily and contains only a trace of albumin. Large granular casts are characteristic of the chronic form of parenchymatous nephritis and while either of the other forms may show granular casts, they are usually narrow and small. Fatty and waxy casts with oil globules are commonly found in chronic parenchymatous nephritis.

COMPLICATIONS peculiar to acute parenchymatous nephritis are also present in the chronic form, together with numerous others such as acute exacerbations, serous effusion into the tissues, convulsions and uremia, valvular disease of the heart, apoplexy and meningitis.

HOUSE CONFINEMENT when chronic parenchymatous nephritis is existing does not occur until near the termination of the life or when an acute exacerbation of the disease takes place. If an acute inflammation is excited, house confinement lasts from 1 to 2 weeks, when the occupation is again resumed unless the kidneys are so badly diseased that confinement to the house persists until death occurs, which usually takes place within 2 to 4 or 6 weeks.

TOTAL DISABILITY is seldom present in this disease until an acute attack of uremia occurs, when from 2 to 3 or 4 weeks may be necessary provided the individual is able to return to his occupation. Usually, however, when this complication ensues the kidneys are so badly diseased that total disability persists from the beginning of the attack of uremia until death ends the life and this may require from 1 to 3 or 6 months; depending on the condition of the kidneys, the financial position of the individual, mode of treatment, etc.

PARTIAL INDEMNITY FOR TOTAL DISABILITY if payable by the policy after the termination of house confinement may require any number of weeks within the limit of the policy. If the kidneys are not so badly diseased that the individual becomes strong enough to get out of the house after having suffered an attack of uremic poisoning, from 1 to 2 or 4 months are generally sufficient.

EFFECTS: Chronic parenchymatous nephritis almost invariably terminates by death within six to eighteen months after it is first recognized. Therefore, if an individual is suffering with this form of kidney degeneration, insurance of all kinds must

be refused. When a claim is paid for this disease, insurance companies cancel all accident and health insurance. Life insurance, however, in such cases should be kept in force by the individual, as it is only a question of time until death occurs.

CHRONIC INTERSTITIAL NEPHRITIS

SYNONYMS: Chronic Bright's disease; interstitial nephritis; diffuse nephritis; sclerosis of the kidneys; red granular kidney; contracted kidney; gouty kidney.

INFORMATION: Chronic interstitial nephritis is a long standing inflammation of the connective tissue of the kidneys which causes a hardening and contraction of the whole organ. It is more common between the ages of forty and sixty years and is more frequently met with in males than in females. It is caused by alcoholism, syphilis, chronic lead poisoning, chronic cystitis, cardiac and liver diseases, and is sometimes a primary inflammation.

SIGNS AND SYMPTOMS: This disease, like parenchymatous nephritis is insidious in onset and is often first diagnosed by a life insurance examiner. The signs and symptoms are vague and may be referable to the heart, blood vessels, gastro-intestinal tract, the brain or kidneys. When the heart is involved, the action is forcible with high arterial tension, the second aortic sound is accentuated and hardening of the arteries is noticeable; pain in the cardiac region with dyspnea and palpitation occur. Gastric disturbances result in loss of appetite, chronic dyspepsia and sometimes nausea and vomiting. Attacks of vertigo with headache, drowsiness, convulsions and apoplexy are frequent. The urine is pale, excessive in amount, of low specific gravity, and usually contains a trace of albumin, but at times this is absent; hyaline casts are present together with narrow pale, granular casts in some cases.

DIFFERENTIAL DIAGNOSIS between this disease and chronic parenchymatous nephritis is generally made by an examination of the urine, although the history and evidence of the involvement of other organs assist in determining when a chronic interstitial nephritis exists.

Chronic Parenchymatous Nephritis shows a small quantity of urine of high specific gravity, dark in color with much albumin, large hyaline and granular casts, while interstitial nephritis shows an excessive amount of pale urine, of low specific gravity, little or

no albumin, with narrow hyaline casts, and when granular casts are found they are narrow and small. Interstitial nephritis is usually complicated by involvement of the heart with accentuation of the second aortic sound and hardening of the arteries, and this is not so common in the other form.

COMPLICATIONS: *Apoplexy* is a common sequelæ when this disease is existing and is the result of a break in the hardened arteries.

Organic Disease of the Heart resulting in valvular changes frequently accompanies this disease, sometimes preceding it, while in other cases it follows.

Uremia may result at any time during the course of this disease, but occurs less often than when chronic parenchymatous nephritis is existing.

Pneumonia, Bronchitis and Pleurisy are frequent complications and often produce a fatal result.

Pericarditis when it occurs in an individual suffering with this disease is almost invariably fatal.

All of the above complications produce or prolong an already existing disability according to the physical condition of the person suffering with the disease, the surroundings and the ability to secure proper treatment.

HOUSE CONFINEMENT in this disease does not exist until near the termination of the attack unless it is produced by an acute exacerbation or one of the various complications, and when due to an acute attack of inflammation usually lasts from 1 to 2 or 3 weeks. When a complication causes house confinement, the time is governed by the nature of the complication and if at all severe, death generally terminates the case in 1 to 2 weeks.

TOTAL DISABILITY in chronic interstitial nephritis does not take place until an acute inflammation supervenes or a complication causes loss of time. In the first instance from 2 to 3 weeks are usually ample for an individual to sufficiently recover so that part of the duties may be resumed. When a complication causes total disability the time is governed by the complication, and this may be prolonged from 1 to 2 or 3 weeks if the illness ends during cold and wet weather and the individual is getting near the end of life. As this form of nephritis advances, total disability may begin without an acute attack and in such cases it persists until death terminates the case, and this may require from 1 to 3 or 6 months.

PARTIAL INDEMNITY FOR TOTAL DISABILITY

if payable by the policy after the ending of house confinement may require from 1 to 2 or 3 weeks in some cases, but this form of disability—even if payable by the policy—is not often demanded.

EFFECTS: If chronic interstitial nephritis is known to exist or even suspected, an insurance company will not issue any kind of insurance on such a person and if life or health insurance is carried by an individual suffering with this disease and the fact becomes known to the company issuing the policies, they will be cancelled at once.

CYSTITIS

SYNONYMS: Catarrh of the bladder; inflammation of the bladder.

INFORMATION: Cystitis or inflammation of the bladder is due to infection and follows a number of causes. Acute cystitis is usually a complication of some disease of the genito-urinary tract, such as urethral infection, cancer, tuberculosis, enlarged prostate, stone and various growths in the bladder. It may also be due to exposure, kicks or blows over the bladder region, long retention of urine, traumatism from the passing of a catheter, the elimination of drugs,—most notably cantharides and secondary to infectious fevers. Chronic cystitis exists when a constant irritation is present, such as produced by a stone in the bladder, enlarged prostate gland, etc.

SIGNS AND SYMPTOMS of acute cystitis are usually sudden in onset, beginning with a feeling of depression, a constant desire to urinate with the frequent passage of small quantities of urine accompanied by a burning pain. There is loss of appetite, headache, rigors and each micturition is accompanied by vesical tenesmus. An examination of the urine shows it to be thick and cloudy, usually acid in reaction and containing albumin, mucus, pus and sometimes blood cells with a large number of bacteria. More or less elevation of temperature is present and nervousness generally accompanies the disease. Chronic cystitis may follow the acute form or may develop gradually from some constant irritation inside the bladder. It is unaccompanied by elevation of temperature, while pain and tenderness, if present, are usually slight. The urine in this condition is turbid, of bad odor and on standing shows a heavy precipitate of mucus, pus and often blood with a great excess of phosphates.

DIFFERENTIAL DIAGNOSIS: *Pyelitis* is sometimes diagnosed as cystitis, but in this disease the dull pain over the kidneys is transmitted along the ureters and while frequent micturition occurs, it is not complicated with vesical tenesmus. The urine is turbid, but acid in reaction and contains renal epithelium; in addition to the above, systemic symptoms due to the presence of pus frequently present themselves.

COMPLICATIONS: *Venereal Disease* often complicates an attack of cystitis; the latter being due to the spread of this infection. When cystitis follows a venereal infection, an insurance company would not pay indemnity under a disability policy if it was known that such a condition existed or caused the cystitis.

Tuberculosis of the Bladder Walls frequently produces a cystitis and when this condition is present the disease will generally be found existing in some other part of the body. If an individual suffering from a cystitis which was due to or complicated by a tuberculous condition in some other part of the body, would claim indemnity for this disease and had only carried a disability policy a short time, an insurance company would not recognize the claim as the tuberculosis would be existing before the policy was taken out or became in effect.

Cancer of the Walls of the Bladder is generally complicated with a cystitis and when this disease is existing, unless a disability policy has been in force a number of months, an insurance company would not be liable for the disability caused by the cystitis, for the reason that the cancer would probably have been existing before the policy was issued.

HOUSE CONFINEMENT in mild uncomplicated cases of cystitis lasts from 5 to 10 days and when a severe infection has taken place, from 2 to 3 weeks are necessary. If the termination of the inflammation occurs during cold and wet weather, house confinement is generally prolonged from 2 to 5 days. When this disease exists as a complication or follows a pre-existing disease, it usually increases disability from 1 to 3 weeks, according to the severity of the inflammation.

TOTAL DISABILITY in the average case of cystitis which is not of venereal origin, lasts from 10 to 14 days; this time depending on the severity of the disease, the advantages of treatment, the condition and age of the individual. Sometimes, however, a cystitis seems intractable, in which case total disability may last from 3 to 5 or 7 weeks. Usually, however, in these cases

there is some complication which prolongs the period of disability.

PARTIAL INDEMNITY FOR TOTAL DISABILITY if payable by the policy after the termination of house confinement is not often required, for the reason that an individual who has suffered from this disease can generally return to his occupation as soon as house confinement is ended.

EFFECTS: An individual suffering from an attack of acute uncomplicated cystitis is insurable for all kinds of insurance from two to four months after complete recovery. Whenever a claim is received alleging cystitis as the cause of disability, it is very important to an insurance company that it is not venereal in origin, as very few policies pay disability as the result of a specific infection. If a history of this disease exists and it is known that it was venereal in origin, very few insurance companies would refuse to issue all kinds of insurance unless the moral hazard was extremely bad in other respects. If the disease becomes chronic, such a person is uninsurable for any kind of a policy.

PYELITIS

SYNONYMS: Suppurative nephritis; pyelo-nephritis.

INFORMATION: Pyelitis is an acute catarrhal inflammation involving the pelvis of the kidney and follows exposure, cystitis and urethritis, the excretion of irritating drugs, specific fevers and stone in the kidney.

SIGNS AND SYMPTOMS: Simple catarrhal pyelitis begins with a dull pain over the region of the kidneys followed by chilliness, slight fever, frequent micturition with the passage of urine which is acid or neutral in reaction, of a milky white appearance and when allowed to stand a heavy sediment containing mucus, epithelial cells, casts and pus corpuscles are precipiated. If a catarrhal pyelitis becomes suppurative, pain and tenderness are increased in the lumbar region and symptoms of a septic condition supervene.

DIFFERENTIAL DIAGNOSIS: *Cystitis* is differentiated from pyelitis by the absence of lumbar pain and alkaline reaction of the urine; also by the microscope which shows the absence of renal epithelium and the presence of bladder cells.

Perinephritic Abscess causes a circumscribed swelling in the lumbar region and terminates in the evacuation of the abscess.

It is accompanied by pain which is increased by motion or pressure, hectic symptoms and normal urine.

Tuberculous Pyelitis generally has a history of tuberculosis in some other part of the body and the microscope shows the bacillus of tuberculosis in the urine.

Calculous Pyelitis is sudden in onset and is accompanied by sharp pain which radiates down the ureters and is characterized by the passage of bloody urine.

The diagnosis of diseases affecting one or both kidneys is best made at the present time by the use of a cystoscope and the catheterization of each ureter separately. This method of diagnosis gives good results in the hands of experts and should be used in all obscure cases of diseases of the kidneys.

COMPLICATIONS: *Uremia* is a frequent complication of pyelitis, when both kidneys are more or less involved. If this condition ensues, death often takes place and if recovery follows, disability is greatly prolonged.

HOUSE CONFINEMENT in cases of pyelitis involving one kidney only and in which there is no obstruction to the outlet of pus, requires from 1 to 2 and sometimes 3 weeks. If both kidneys are involved the termination is usually fatal and occurs within 2 to 3 weeks.

TOTAL DISABILITY in uncomplicated cases of pyelitis involving one kidney usually lasts from 2 to 3 weeks in all classes of risks. If both kidneys are affected total disability may last from 1 to 3 weeks only and be terminated by death. When recovery takes place the period of disability is uncertain, sometimes lasting from 3 to 4 or 6 weeks.

PARTIAL INDEMNITY FOR TOTAL DISABILITY if payable by the policy after the termination of house confinement sometimes requires from 3 to 6 weeks in cases of this disease.

EFFECTS: Individuals with a history of an attack of pyelitis involving one kidney, would not be insurable for life or health insurance until at least one year after complete recovery and a medical examination would show normal urine and absence of any systemic disease. If both kidneys were involved and recovery followed, such a person would not be insurable for life or health insurance until two to four years after complete recovery and subject to the above conditions of an examination. Accident insurance in either case, however, would be written from two to

three months after complete recovery by the majority of casualty companies.

RENAL CALCULI

SYNONYMS: Nephro-lithiasis; renal colic; gravel.

INFORMATION: The formation of renal calculi in the pelvis of the kidney is due to the precipitation of various solid constituents of the urine and is more common in females than in males. It occurs at all ages, but is more frequent between forty and fifty years of age. Renal calculi vary in size from coarse sand

Fig. 111.—Kidney showing calculi lodged in the calices of the pelvis (natural size). (Greene and Brooks).

to a large bean and are composed of a central nucleus, which is surrounded by layers of different material causing a stratified appearance on cross section. They are composed of uric acid, urates and oxalate of lime and phosphates; occurring more frequently in the above described order.

SIGNS AND SYMPTOMS: Renal calculi may exist in the pelvis of one or both kidneys for an indefinite time without causing any inflammation and therefore such a condition is unknown.

When an inflammation is set up for any reason and nature attempts to expel these concretions, severe and intense pain comes on suddenly and this is transmitted down the ureters and is accompanied by tenderness in the lumbar region. The face becomes pale and pinched, while the body is cold and covered with perspiration. The specific gravity of the urine is above normal, it is slightly albuminous, contains much blood with epithelium and a few long, narrow, hyaline casts; pus cells may or may not be present.

DIFFERENTIAL DIAGNOSIS: *Colic* due to gall-stones is sometimes mistaken for renal colic, but in this disease the pain radiates to the shoulder, the gall-bladder is tender and enlarged and can be palpated in thin subjects, jaundice is common, while the urine is negative and sometimes stones are found in the stools.

Appendicitis may be diagnosed as an attack of renal calculi, but in the former there is a distinct swelling in the lower right iliac region, with rigidity of adjacent muscles, localized pain and tenderness with absence of pain in the region of the kidneys and normal urine.

Movable Kidney is distinguished by pain of a dragging or pulling character and referred to either side of the median line, with evidence of a movable tumor in the abdomen. If the ureter becomes twisted, the urine is scanty and as the kidney slips back into place the discharge becomes copious.

COMPLICATIONS: *Suppurative Pyelitis* may complicate a stone in the kidney; in which event disability is prolonged, and if both kidneys are involved a fatal termination commonly occurs.

HOUSE CONFINEMENT seldom exists in persons suffering with renal calculi except when an attack of renal colic occurs. In such cases an attack of colic does not cause house confinement, but the laceration and tearing of the ureter by a stone in the passage from the kidney to the bladder, together with the shock due to the severe pain, causes house confinement of from 1 to 3 or 7 days. Should the stone in its passage through the ureter become lodged at any point and an operation be necessary for its removal, house confinement lasts from 4 to 6 or 8 weeks after the date of operation.

TOTAL DISABILITY is rarely payable to individuals suffering with renal calculi unless an attack of renal colic occurs and if this is uncomplicated and the policy pays for a period of disability when less than seven days duration, from 3 to 5 days are usually sufficient. If an operation is performed for the removal

of the stone, from 6 to 8 weeks of this form of disability may be necessary in all classes of risks.

PARTIAL INDEMNITY FOR TOTAL DISABILITY if allowed by the policy after the termination of house confinement, is not payable to persons suffering with an attack of renal colic which does not necessitate an operation. When an operation has been performed, from 2 to 4 weeks of this form of indemnity may be demanded.

EFFECTS: If a history of renal colic exists in any individual or a diagnosis of renal calculi has been made by a competent physician, life or health insurance must be denied a person suffering with such a condition. Accident insurance would be written, however, by some companies from one to two months after such an attack and apparent recovery, but it is questionable if the issuance of any kind of insurance is good underwriting.

UREMIA

SYNONYMS: Uremic poisoning; uremic intoxication; uremic convulsions; uremic coma.

INFORMATION: Uremia is the name applied to a condition which results when the function of the kidneys is interfered with for any cause and the poisons which they eliminate are retained and disseminated throughout the system. During the course of an acute or chronic Bright's disease, these symptoms may develop slowly or suddenly. This condition may also occur when the kidneys are tuberculous or cancerous. It sometimes follows operations and also child-birth.

SIGNS AND SYMPTOMS: An attack of uremic poisoning usually begins with diminution in the amount of urine voided, headache, vertigo, edema in different parts of the body and sudden blindness, with convulsions and coma. Sometimes these attacks are accompanied by nausea and vomiting, elevated temperature and increase in pulse and respiration.

DIFFERENTIAL DIAGNOSIS between unconsciousness due to uremia and other conditions which may produce it, is important and is fully considered under Concussion of the Brain.

COMPLICATIONS: *Uremia* is usually a complication of some preceding disease and when it exists, it is generally good evidence that one or both kidneys are badly diseased, provided it does not occur during an acute attack of nephritis.

HOUSE CONFINEMENT in cases suffering with uremic

poisoning is uncertain and depends on the condition of the kidneys, the physical strength of the individual, the length of time the poison has been retained in the system and also the amount. A fatal termination often takes place within 3 to 7 days and if this does not occur but a partial or complete recovery follows, house confinement may last from 1 to 3 weeks or more; this time being governed by the physical condition and the extent to which the kidneys are diseased.

TOTAL DISABILITY in cases which terminate fatally lasts from 3 to 7 days and when recovery takes place from 3 to 6 weeks are usually required for this form of disability. Attacks of uremia occurring during the winter months prolong the above period of disability 1 to 2 weeks.

PARTIAL INDEMNITY FOR TOTAL DISABILITY when payable under the terms of the policy after the termination of house confinement may require from 1 to 2 or 3 weeks; this time depending on the age, severity of the attack and weather conditions.

EFFECTS: Individuals with a history of an attack of uremic poisoning are generally those who have suffered from an acute attack of nephritis or are suffering with the chronic form. In the former, however, life or health insurance cannot be written until six to twelve months after complete recovery and several examinations of the urine extending over a considerable time have been made and this excretion found to be normal. Accident insurance can be issued in this class of cases from two to three months after complete recovery and a medical examination has shown the urine to be normal. In chronic cases of nephritis all forms of insurance must be denied a person suffering with such a disease.

CHAPTER XIX

FEVERS

CEREBRO-SPINAL FEVER

SYNONYMS: Epidemic cerebro-spinal fever; epidemic cerebro-spinal meningitis; cerebro-spinal typhus fever; spotted fever.

INFORMATION: Cerebro-spinal fever is a malignant disease, usually occurring in epidemics and more frequent in the winter and spring months. The young are more often affected and the period of incubation is unknown.

SIGNS AND SYMPTOMS: This disease is divided into three forms, the abortive, the common and the fulminate; the signs and symptoms being the same, except that the degree of severity is more pronounced in one than the other. An attack generally begins suddenly with a chill, severe headache, vertigo, nausea and vomiting. This is followed in a few hours by excruciating pain and rigidity in the muscles of the head, back and limbs, resulting in retraction of the head and back, thus producing opisthotonos and inability to straighten the leg when in the recumbent posture. Intolerance of light, with impaired taste, smell and hearing, hyperesthesia, with convulsions and delirium follow. The temperature in this disease is markedly irregular and gives no assistance in making the diagnosis. A peculiar purpuric rash appears from the first to the fifth day in the majority of cases and the tache cerebrale is usually obtainable.

DIFFERENTIAL DIAGNOSIS is positively made by lumbar puncture of the spinal cord. If this disease exists the fluid is cloudy and in some epidemics the diplococcus is found.

Typhoid Fever may be mistaken for cerebro-spinal fever in the early stages, but this disease is gradual in onset and has been preceded by a period of malaise. It is characterized by diarrhea, tympanitis, enlarged spleen, rose spots, characteristic temperature curve and the Widal reaction is usually obtainable.

Typhus Fever in the early stages may be confused with cerebro-spinal fever, but in typhus fever the eruption does not appear until the fifth to the seventh day and is known as a measly erup-

tion which does not disappear on pressure. Great prostration exists and absence of pain in the back and limbs and opisthotonos is noticed.

Small-Pox may cause an error in diagnosis during the first few days, as this disease is characterized by severe headache and lumbar pains with vomiting and a rash. The rash, however, first shows itself on the forehead and wrists by small shot-like particles under the skin.

Tuberculous Meningitis is slow in onset, often extending over a considerable time before it begins to resemble cerebro-spinal fever. It is not epidemic and no eruption appears, there is only a slight tendency to opisthotonos and a careful examination generally shows the existence of a tuberculous process in some other part of the body.

Complications involving the heart and lungs occur frequently, the most common being pneumonia, which may be present early or late in the disease and endocarditis and pericarditis.

SEQUELAE are common after recovery from an attack of this disease. Persistent headache from chronic meningitis frequently remains a considerable time. There may be defective hearing from a suppuration of the internal or middle ear, impaired vision from inflammation involving the cornea, retina or optic nerve, imbecility, chronic hydrocephalus and different forms of paralysis.

HOUSE CONFINEMENT in the abortive form lasts from 3 to 7 days, when convalescence is established sufficiently to permit the individual being outside. In the common form, house confinement of from 2 to 4 or 6 weeks is necessary, this depending on the severity of the infection and the physical condition. The fulminate form usually produces death within 1 to 2 days and therefore house confinement does not last longer than this time.

TOTAL DISABILITY in abortive cerebro-spinal fever lasts from 1 to 2 or 3 weeks; the common form from 4 to 8 or 12 weeks and in the fulminate form from 1 to 2 or 3 days only. If complete recovery does not take place after an attack of this disease and imbecility results, total disability may be permanent and require the limit of time allowed by the policy.

PARTIAL INDEMNITY FOR TOTAL DISABILITY if payable by the policy after the termination of house confinement may be necessary and usually requires from 3 to 6 weeks, but in some cases the limit of the policy must be allowed when a full mental recovery does not take place.

EFFECTS: Individuals having suffered an attack of cerebro-spinal fever in childhood in which recovery has taken place and no bad effects are noticeable, are insurable for all kinds of insurance in adult life. If the disease occurs later in life and apparent complete recovery follows, life or health insurance cannot be issued until two to three years after the attack and a medical examination shows the recovery to have been complete. Accident insurance in such cases, however, can be safely written from six to nine months after recovery follows the termination of the disease.

DENGUE

SYNONYMS: Break-bone fever; dandy fever; neuralgic fever.

INFORMATION: Dengue is an acute febrile disease, occurring in epidemics and seldom seen except in hot climates. The cause is unknown, but it is supposed to be due to an undiscovered microbe.

SIGNS AND SYMPTOMS: This disease is sudden in onset beginning with headache, backache, pain in all the muscles and joints of the body with nausea, vomiting, high fever running from 101° to 103° F, and a rash which resembles scarlatina. These symptoms persist for from a few hours to several days, then an intermission of one to two days follows, when the symptoms recur and last from one to two or three days. Relapses are frequent and prolong the period of disability.

DIFFERENTIAL DIAGNOSIS: *Acute Articular Rheumatism* is often mistaken for dengue, but in this disease one or more joints become affected with redness, swelling and intense pain and after a period of time other joints are involved; acid sweats occur and the duration is much longer.

Scarlet Fever or Measles are sometimes diagnosed for dengue but in either of these diseases there is absence of pain in the muscles and joints of the body, and symptoms characteristic of the two diseases soon show themselves sufficiently for a proper diagnosis.

COMPLICATIONS involving the nervous system are most frequently seen following this disease and when they occur disability is prolonged an uncertain time.

HOUSE CONFINEMENT lasts from 1 to 2 weeks in the

average case, but on account of the frequency of relapse, this time may be extended and require from 2 to 3 or 4 weeks.

TOTAL DISABILITY in all classes of risks usually lasts 2 weeks, provided a relapse has not occurred; each relapse prolongs this period of disability from 3 to 7 days.

PARTIAL INDEMNITY FOR TOTAL DISABILITY if payable by the policy in addition to house confinement, generally demands from 1 to 2 or 3 weeks.

EFFECTS: All forms of insurance can be safely issued to individuals who have suffered from this disease, from two to four months after complete recovery.

INTERMITTENT MALARIAL FEVER

SYNONYMS: Intermittent fever; swamp fever; ague; chills and fever.

INFORMATION: Intermittent malarial fever is a paroxysmal fever caused by the Plasmodium malariæ of Laveran, which is found in the blood of those suffering from the disease. All forms of malarial fever are caused by the bite of certain mosquitoes and all ages and both sexes are equally affected.

SIGNS AND SYMPTOMS occur in paroxysms and consist of three stages—the cold, hot and sweating—in the order named. The first or cold stage begins with chilliness, aching in the limbs, yawning, headache and nausea and this condition finally develops in a pronounced chill in which the surface of the skin is pale and cold, chattering of the teeth is present and is accompanied with thirst, while the temperature is elevated, reaching as high as 102° to 104° F. This condition may persist from a few minutes to one-half hour or more, when it is superseded by the hot stage which begins gradually; the skin instead of being cold becomes hot and flushed, the eyes injected, with headache, nausea, thirst and high temperature with scanty and dark colored urine. This stage lasts from one to five or eight hours and in turn is followed by the sweating stage which also begins gradually, the sweat appearing on the forehead and slowly spreading over the entire surface of the body. After the perspiration is fully established, headache and other pains grow less violent, the fever gradually subsides, and finally the sweating stage which lasts from three to five hours terminates by sleep, when the individual awakens much refreshed. The temperature becomes normal and remains so until another paroxysm takes place, when the same chain of signs and

PLATE XIV

Various Forms of Malarial Parasites (Thayer and Hewetson).

Figs. 1-10 inclusive, tertian organisms; Figs. 11-17 inclusive, quartan organisms; Figs. 18-27 inclusive, estivo-autumnal organisms.

Fig. 1.—Young hyaline form; 2, hyaline form with beginning pigmentation; 3, pigmented form; 4, full-grown pigmented form; 5, 6, 7, 8, segmenting forms; 9, mature pigmented form; 10, flagellate form.

Fig. 1.—Young hyaline form; 12, 13, pigmented forms; 14, fully developed form; 15, 16, segmenting form; 17, flagellate form.

Figs. 18, 19, 20.—Ring-like and cross-like hyaline forms; 21, 22, pigmented forms; 23, 24, segmenting forms; 25, 26, 27, crescents.

symptoms are repeated. These attacks follow one another according to the variety of the malarial fever, either the quotidian, the paroxysm occurring daily; tertian every other day; quartan every fourth day; octan every seven days; duplicating quotidian or tertian when two paroxysms occur on the day they are due, and several other rare forms. The spleen is always enlarged during an attack of malarial fever.

DIFFERENTIAL DIAGNOSIS: *Intermittent Malarial Fever* should not be hard to diagnose, for the reason that a microscope always shows the hematozoon present during an attack.

Hectic Fever is sometimes mistaken for malarial fever, but when this condition exists the spleen is not enlarged and absence of the characteristic malarial organism from the blood is noted.

Neurasthenia in which nervous chills occur, is not followed by increased temperature and sweating.

SEQUELAE: *Pernicious Malarial Fever* may supervene in individuals who suffer from attacks of intermittent fever. If this condition follows, total disability is not only greatly prolonged, but a fatal termination is usually the result.

HOUSE CONFINEMENT in intermittent fever depends on the occurrence of the paroxysm. In the quotidian form in which a paroxysm occurs daily, house confinement of from 3 to 7 or 10 days may be necessary before the disease is under control. The tertian and quartan forms in which the paroxysm occurs on the second or fourth day may or may not cause house confinement, according to the severity of the infection and the physical condition of the individual. House confinement in such cases, if it occurs, does not last more than 1 to 2 days at a time and is separated by an interval in which the sufferer is not confined to the house.

TOTAL DISABILITY like house confinement depends on the number and the time of occurrence of the paroxysms. In the quotidian and tertian forms, total disability may last from 1 to 2 weeks. In the quartan form, total disability lasts from 1 to 2 days at a time and is followed by a period in which the occupation can be resumed for 1 to 2 days. This form seldom causes disability which is covered by a health or disability policy.

PARTIAL INDEMNITY FOR TOTAL DISABILITY if payable by the policy after the termination of house confinement is sometimes necessary in persons who suffer from the quotidian or tertian form of intermittent fever. In such cases from

1 to 2 weeks of this form of disability may be required for severe attacks of either of these varieties of intermittent fever.

EFFECTS: When a history of repeated attacks of intermittent fever exists in an individual, such a person is not insurable for health insurance at any time without a waiver eliminating indemnity for malaria. Life and accident insurance might be accepted by some companies with such a history, but it is questionable if a person with chronic malaria is insurable for these forms of insurance. If an individual has suffered with malaria and recovery has been complete, all forms of insurance can be safely written from six to twelve months after the termination of the disease.

REMITTENT FEVER

SYNONYMS: Estivo-autumnal fever; bilious fever; bilious remittent fever; typho-malarial fever; marsh fever; jungle fever.

INFORMATION: Remittent fever is a paroxysmal fever in which the temperature is lowered during the interval, but never becomes normal. It is due to a specific organism, the Plasmodium malariæ of Laveran. The disease is more common in

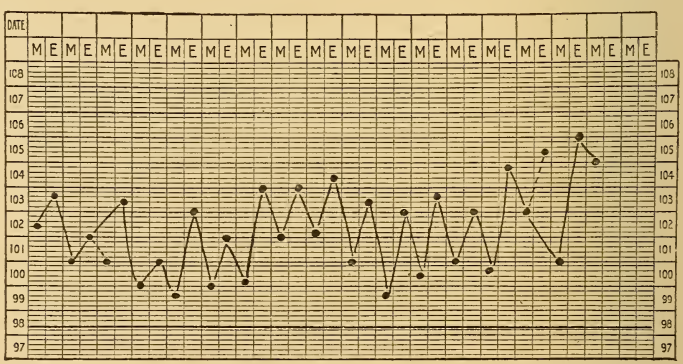


Fig. 112.—Temperature chart of remittent fever. (Paul).

tropical countries with marshy districts where it is found at all seasons of the year and where it assumes its most severe form.

SIGNS AND SYMPTOMS of remittent fever depend on the different stages. The cold stage is usually not as well marked as in intermittent fever, the chill being less severe and only a slight elevation of temperature occurring, while pain in the head and throughout the body is only slight. This stage,

however, may be very marked when an unusually severe infection has taken place. The hot stage follows the preceding one and is marked by fever, the temperature rising to 104° or 106° F., it is accompanied by an increased pulse rate, flushed face, intense headache with pain in the limbs, persistent vomiting, the passage of small amounts of high colored urine and in some cases delirium is seen in this stage which lasts from six to twenty-four hours. Following this, the sweating stage comes on and persists for two to twelve hours or more, during this period the headache and vomiting subside and the temperature falls several degrees but not to the normal point, usually stopping between 99° to 100° F. These three stages are then followed by the remission in which the signs and symptoms of a mild pyrexia are present, this remission lasting from two to six or twelve hours and sometimes longer, when the above routine is again commenced, minus the cold stage in the majority of cases, the second part of the disease usually commencing with the hot stage. In this form of malaria, the spleen is enlarged, the liver swollen and congested and the characteristic organism is found in the red corpuscles.

DIFFERENTIAL DIAGNOSIS: *Intermittent Fever* is diagnosed from remittent fever by the fact that between the paroxysms a distinct intermission occurs in which the temperature becomes normal; also in intermittent fever each paroxysm commences with a chill, while in the other form after the first paroxysm, the chill is generally omitted. In remittent fever the individual is ill during the remission, while in intermittent fever he is apparently well.

Typhoid Fever is often mistaken for remittent fever, but in this disease there are marked abdominal symptoms such as tympanites, rose-colored spots, the Widal reaction in the blood and absence of the hematozoa from the blood as found in remittent fever. Typhoid fever has a temperature record which is entirely different from that of remittent fever.

Yellow Fever is differentiated from remittent fever by the high fever with which this disease commences, a peculiar and characteristic odor which is emitted, the single remission in the temperature which is followed by jaundice of the skin, black vomit and hemorrhages into other parts. Examination of the blood shows the absence of the characteristic Plasmodium malariæ.

SEQUELAE: *Malarial Cachexia* may follow repeated attacks of remittent fever. If this condition supervenes, total dis-

ability is prolonged indefinitely and in some cases is terminated by death.

HOUSE CONFINEMENT does not exist in mild cases of this disease; the individual remaining in the house a few hours at a time during the hot stage. In more severe forms, house confinement lasts from 7 to 10 days and this may sometimes be increased from 3 to 7 days when the attacks are unusually severe and long and the remission is less marked than usual.

TOTAL DISABILITY in mild cases of remittent fever occurring in the temperate zone, lasts from 1 to 2 weeks. If the disease occurs in the tropics and is severe, from 2 to 4 weeks are necessary; this time depending on the number of times the paroxysms are repeated and the character of the remission.

PARTIAL INDEMNITY FOR TOTAL DISABILITY if payable by the policy after the termination of house confinement is not often necessary in mild attacks of remittent fever in the temperate zone, but in the tropics from 1 to 2 weeks of this form of disability are generally required after a severe attack.

EFFECTS: Individuals living in hot climates with a history of having suffered one or more attacks of remittent fever are not insurable for life or health insurance until six to twelve months after the termination of an attack, and good underwriting would demand a waiver on a health policy eliminating disability for this disease. Accident insurance can be written from one to two months after the termination of an attack.

PERNICIOUS MALARIAL FEVER

SYNONYMS: Malignant intermittent fever; malignant remittent fever; congestive fever; congestive chill.

INFORMATION: Pernicious malarial fever is a malignant form of this disease which results in death within a short time. It represents the severest form of poisoning due to the characteristic organism and is not common except in the tropics.

SIGNS AND SYMPTOMS show themselves according to the variety of the disease. The cerebral form is characterized by delirium, stupor and coma, often resembling an attack of apoplexy or acute meningitis. The thoracic variety produces dyspnea, increased respiration, cough and weak pulse. The gastroenteric form often accompanies the thoracic and is diagnosed by the nausea, vomiting, diarrhea with blood, tenesmus and thirst. The hemorrhagic variety is characterized by nausea, vomiting,

pain in the region of the liver and the kidneys, yellow discoloration of the skin and the passage of bloody urine. The algid form is recognized by the intense coldness of the skin, while the rectal temperature runs from 104° to 106° F. The body is covered by a cold perspiration, the voice is feeble, pulse slow and sometimes imperceptible, intense thirst is present and the mind is clear.

DIFFERENTIAL DIAGNOSIS: *Apoplexy or Meningitis* may be mistaken for pernicious malarial fever, but in apoplexy more or less paralysis is noticeable and this is not present in malaria; while in meningitis there is a gradual onset accompanied by photophobia, diminished brain activity and sometimes paralysis.

Cholera in the beginning of an epidemic may be diagnosed for pernicious malarial fever, the gastro-enteric form of this disease being mistaken for the early stage of cholera and the algid form for the later stage.

Typhoid Fever must be distinguished from pernicious malarial fever and this is done by noting the gradual onset in typhoid, with epistaxis, tympanities and diarrhea, with absence of chills and vomiting. Examination of the blood serves to make the diagnosis clear.

Yellow Fever is difficult of diagnosis, as both diseases occur in the same localities. Yellow fever, however, does not produce the yellow discoloration of the skin until the later stages, while in pernicious malarial fever it is an early sign. The vomiting of blood is characteristic of yellow fever and not of the other disease.

COMPLICATIONS: *Chronic Malarial Cachexia* may follow this disease when recovery takes place and if this form of malaria supervenes, disability is greatly prolonged and usually ends in death.

HOUSE CONFINEMENT in the average case of this disease seldom lasts more than from 1 to 2 or 3 days when the attack terminates by death. If recovery takes place, house confinement of 1 to 2 weeks may be necessary.

TOTAL DISABILITY is not often more than from 2 to 3 days except in the few cases that recover, when this form of disability may become permanent on account of the chronic malarial cachexia resulting. In such cases total disability runs the limit of the policy.

PARTIAL INDEMNITY FOR TOTAL DISABILITY if payable by the policy after the termination of house confine-

ment in cases that recover may require the full time as allowed by a health or general disability policy, on account of the disease becoming chronic in character.

EFFECTS: Individuals having suffered an attack of pernicious malarial fever which is followed by recovery, are not insurable for any kind of insurance until at least two to three years have passed after the termination of the attack and no symptoms referable to it show themselves during that time. At the end of this time, an application for any kind of insurance may be considered from an individual with such a history.

MEASLES

SYNONYMS: Rubeola; morbilli.

INFORMATION: Measles is an acute, highly contagious and epidemic disease, more common in children but sometimes occurring in unprotected adults. One attack usually confers immunity, but not always. The period of incubation is said to be from ten to fourteen days.

SIGNS AND SYMPTOMS: The onset is gradual beginning with a chill, increased temperature running from 101° to 102° F., headache and catarrhal symptoms referable to the nose and throat, with redness of the eyes and photophobia. This condition continues from twenty-four to thirty-six hours when a remission occurs in the fever, but on the third or fourth day an eruption consisting of dark red papules forming themselves in the shape of crescentic groups, appears on the forehead and face and then spreads over the entire body. This eruption persists from three to four days when it fades and sometimes is followed by a slight desquamation. Black measles is a form in which hemorrhages in spots occur under the skin, it is more severe and is generally complicated with diseases of the chest. Rubella or German measles is a distinct disease resembling measles, but the symptoms are less marked and disability is shorter than in an attack of ordinary measles.

DIFFERENTIAL DIAGNOSIS: *Scarlet Fever* is diagnosed from measles by the presence of high fever, rapid pulse, the early appearance of a bright red rash covering the entire body, the absence of catarrhal symptoms and the development of complications involving the ears or kidneys.

Rotheln may be mistaken for measles, but in this disease the prodromes are slight and sometimes absent, the catarrh is not

as well marked, the eruption appears at any time from the first to the fourth day and consists of rose-colored spots slightly elevated which coalesce and form irregular shaped patches. This disease terminates within a week by lysis and leaves no bad effects.

COMPLICATIONS: *Bronchopneumonia* is a frequent complication of measles and when it occurs, disability is prolonged and varies according to the severity of the complication and strength of the individual.

Gastro-Intestinal Catarrh often follows an attack of measles when an adult suffers from this disease of childhood.

Tuberculosis is one of the frequent complications when measles occurs in children, but it rarely follows an attack in adults.

HOUSE CONFINEMENT in individuals who might be disabled by this disease seldom begins until the appearance of the eruption and does not last more than from 7 to 10 days from this time.

TOTAL DISABILITY in all classes of risks lasts from 1 to 2 weeks unless a complication prolongs this time. If disability from measles terminates during wet and inclement weather, total disability may be increased from 2 to 3 or 5 days.

PARTIAL INDEMNITY FOR TOTAL DISABILITY if payable by the policy after the termination of house confinement, is almost never deserved by claimants who have suffered from this disease.

EFFECTS: Adults suffering from an attack of measles are insurable for all kinds of insurance from two to four weeks after complete recovery takes place.

RELAPSING FEVER

SYNONYMS: Famine fever; spirillum fever; febris recurrens; bilious typhoid fever.

INFORMATION: Relapsing fever is an acute, contagious disease occurring in epidemics, more common in hot climates than in the temperate zone and is caused by a spiral-shaped microbe, the Spirochaeta of Obermeier, which gains access to the body through infected foods and liquids. The period of incubation is from five to eight days.

SIGNS AND SYMPTOMS: The onset of an attack of this disease is sudden, beginning with a chill, followed by fever which reached 102° to 105° F. within twenty-four hours from the time

the chill occurs, and is accompanied by nausea, vomiting, weak pulse, high fever, intense pain in the head, back and joints. These signs and symptoms persist for five or six days when the temperature suddenly falls to normal and other evidence of the disease disappears. This period of calm lasts for the same length of time as the fever has persisted, when it is followed by a relapse which produces the same signs and symptoms in a milder form and is of shorter duration; at the end of the relapse another may take place or a slow convalescence may be established.

DIFFERENTIAL DIAGNOSIS: *Remittent Fever* may resemble relapsing fever, but in the former there is a sweating stage which is not present in relapsing fever, the temperature does not reach the maximum height in remittent fever until after four or

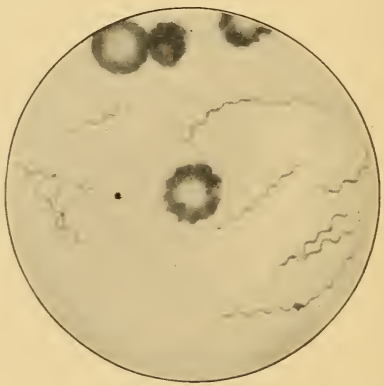


Fig. 113.—Spirochaeta Obermieri from human blood. (Kolle, Wassermann and McFarland).

five days, while in relapsing fever it goes up suddenly and remains high until the crisis,—which occurs abruptly. Microscopic examination of the blood shows the spirillum in relapsing fever and the Plasmodium malariæ in remittent fever.

Yellow Fever closely resembles relapsing fever in the early stages, the temperature reaching a high point in both in the beginning of the disease. In yellow fever, however, the febrile stage is shorter and during the relapse the temperature does not quite reach normal; vomiting in yellow fever occurs in the third stage, while in relapsing fever it is an early symptom. Yellow fever has a characteristic yellow discoloration of the skin and a microscopic examination makes the diagnosis clear by showing the spirillum in relapsing fever.

Typhus Fever occurs under conditions similar to those found in relapsing fever, but in the former there is a contracted pupil, the expression is dull and apathetic, low muttering delirium is present and a spotted eruption which becomes petechial appears.

COMPLICATIONS involving the eyes, lungs, kidneys, spleen, stomach and bowels are frequent in attacks of relapsing fever and prolong disability according to the situation and severity of the complication.

HOUSE CONFINEMENT in an average case of this disease lasts from 3 to 6 weeks. If a number of relapses have occurred and much weakness and emaciation is the result, house confinement may persist from 6 to 10 weeks.

TOTAL DISABILITY lasts from 4 to 6 weeks after an ordinary attack of relapsing fever. If a number of relapses have occurred and house confinement has been lengthened thereby, total disability of from 8 to 10 or 12 weeks may be necessary.

PARTIAL INDEMNITY FOR TOTAL DISABILITY if payable by the policy after the termination of house confinement, depends on the character of recovery and the resulting weakness and emaciation. If the attack has been mild, from 1 to 2 or 3 weeks of this form of disability are sufficient, but when house confinement has been prolonged and accompanied with relapses and complications, from 4 to 8 or 12 weeks of partial indemnity for total disability may be demanded.

EFFECTS: When a history of relapsing fever exists in an individual, insurance of all kinds must be denied such a person until one to two years after complete recovery and a medical examination shows the physical condition to be normal.

SCARLET FEVER

SYNONYM: Scarlatina.

INFORMATION: Scarlet fever is an acute, self-limited, contagious disease, more common in childhood and often complicated with an acute inflammation of the middle ear or kidneys. One attack usually confers immunity. The disease is caused by a poison which has not yet been isolated, but which retains its power of producing a recurrence for a long time. The period of incubation is from a few hours to four or six days.

SIGNS AND SYMPTOMS: Scarlet fever begins abruptly, generally with vomiting or convulsions in young children; in those older and in adults, a chill frequently marks the onset.

There is headache, thirst, coated tongue, constipation, rapid pulse and high fever; the latter soon reaching 104° to 105° F., within twenty-four to forty-eight hours. At the end of the first day a scarlet punctiform rash appears on the neck and chest and rapidly spreads over the body. This rash or eruption lasts from five to seven days when it gradually disappears and is followed by a desquamation of bran-like scales, the temperature at the same time falling by lysis. There is early sore-throat in scarlet fever, often nervous symptoms such as insomnia, delirium and convulsions, the urine is high-colored, scanty and often contains albumin.

DIFFERENTIAL DIAGNOSIS: *Diphtheria* should not cause a mistake in diagnosis, as this disease is not so sudden in onset. It is characterized by a false membrane which contains the Klebs-Loeffler bacillus and the absence of a rash is apparent.

Measles is diagnosed by the preponderance of catarrhal symptoms involving the nose, throat and eyes. The rash does not appear until the third or fourth day and shows itself by blotches which are arranged in a crescentic form and the remission of fever on the second or third day.

Small-Pox is slower in onset and the eruption of this disease, which first appears on the forehead and wrists, does not show until the third day and soon becomes pustular. There is a decided remission in the temperature on the appearance of the rash which is not present in scarlet fever and the character of the rash soon serves to make a correct diagnosis.

Dengue is diagnosed from scarlet fever by the severe pain in the head, back and joints, with stiffness in the muscles and the remission which occurs and lasts from one to two days. The rash of dengue is often accompanied by intense itching and generally the disease is epidemic.

Acute Tonsilitis when accompanied by a rash may resemble scarlet fever, but in the former there is no history of exposure, the characteristic strawberry tongue in scarlet fever is not present, the pulse is less rapid and convalescence is quickly established.

Accidental Rashes result from certain drugs, such as the bromides, quinin, belladonna and from the ingestion of foods like ice cream, berries, crabs, etc. When these rashes are present there is generally a history of a certain article of diet or drug which has been taken and produced the rash previously. Fever and throat symptoms are absent in rashes thus produced, while they are always present in scarlet fever.

PLATE XV

Scarlet Fever Eruption on the Third Day (Hecker, Trumpp, Abt and McCombs).

COMPLICATIONS: *Nephritis* is the most common complication of scarlet fever and develops during convalescence. If severe, death may be the result or a chronic inflammation of the kidneys follow and when this latter occurs, disability is prolonged.

Otitis Media frequently complicates scarlet fever, but unless this causes infection of the mastoid process or brain, disability is not lengthened. When the mastoid process is involved and an operation required for the cure of this complication, disability is greatly prolonged and is described under Injuries and Diseases of the Ears.

The Heart, Lungs and Joints are sometimes affected during an attack of scarlet fever. If these parts of the body are involved, disability is prolonged according to the kind and severity of the complication.

HOUSE CONFINEMENT in mild cases of scarlet fever lasts from 2 to 3 weeks. When the disease is moderately severe, from 3 to 5 weeks are necessary and when especially severe attacks occur and are followed by complications, from 4 to 8 weeks and sometimes longer periods are required; this time depending on the physical condition of the individual and the number and character of the complications.

TOTAL DISABILITY in adults suffering with a mild attack of scarlet fever lasts from 2 to 4 weeks. If the attack has been severe from 4 to 8 weeks are often necessary. Complications involving the kidneys and suppuration of the glands of the neck, cause a prolongation of total disability of from 1 to 2 or 3 weeks.

PARTIAL INDEMNITY FOR TOTAL DISABILITY if payable by the policy in addition to house confinement, in mild cases demands from 1 to 2 weeks and in severe ones from 3 to 6 weeks.

EFFECTS: If a history of a mild attack of scarlet fever exists and a complete recovery has followed as indicated by a medical examination, insurance of all kinds can be granted from three to six months after the termination of the disease. Severe attacks, complicated by inflammation of the kidneys, render the individual uninsurable for any kind of insurance until six to twelve months after complete recovery and frequent examinations of the urine show it to be normal. If suppuration of the ear has existed, insurance companies will not issue any form of policy until one to three years after complete cessation of the discharge. Sometimes accident insurance can be secured by individuals suffering with a

discharge from the ear as the result of scarlet fever or other causes, but it is questionable if such a policy can be safely issued by any company.

SIMPLE CONTINUED FEVER

SYNONYMS: Irritative fever; ephemeral fever; febricula; synocha.

INFORMATION: Simple continued fever is an acute, mild fever of short duration and is usually due to excesses in eating or drinking, violent mental or physical fatigue and exposure to heat or cold. It is more common in children and young adults of a sensitive, nervous temperament.

SIGNS AND SYMPTOMS: This form of fever generally begins suddenly with a feeling of malaise, headache, thirst, coated tongue, chilliness and elevation of temperature which soon reaches a maximum of 102° to 103° F. The bowels are constipated, while the urine is scanty and high-colored. If the fever is caused by errors in diet, nausea and vomiting usually accompany the attack and if in children when due to excitement, convulsions and slight delirium may be present.

DIFFERENTIAL DIAGNOSIS: A number of diseases may begin and resemble simple continued fever, but the persistence of the fever, together with the characteristic signs and symptoms pertaining to the disease which are present, will serve in time to make the diagnosis between simple continued fever and any other disease that may be existing.

HOUSE CONFINEMENT of from 2 to 5 days is usually sufficient for attacks of simple continued fever; sometimes, however, the fever may be unduly prolonged in sensitive individuals, when from 7 to 10 days may be necessary.

TOTAL DISABILITY in all classes of risks seldom lasts more than from 2 to 5 days and unless a disability policy pays for indemnity under one week, no claim exists. Very severe cases of this fever sometimes require from 1 to 2 weeks of total disability.

PARTIAL INDEMNITY FOR TOTAL DISABILITY if payable by the policy after the termination of house confinement should not be necessary, as the disease is not of long enough duration or the temperature high enough to produce sufficient weakness to prevent the occupation being resumed as soon as house confinement ends.

EFFECTS: When an attack of simple continued fever has been suffered, individuals are insurable for all forms of insurance from three to six weeks after complete recovery.

TYPHOID FEVER

SYNONYMS: Enteric fever; entero-mesenteric fever; typhus abdominalis, abdominal typhus; autumnal fever; gastric fever; nervous fever.

INFORMATION: Typhoid fever is an acute, infectious disease due to the bacillus typhosus or bacillus of Eberth, which gains access to the system through infected liquids or foods. It is more common between the ages of fifteen and thirty years and

Fig. 114.—Baccillus of Typhoid, with flagella. (H. K. Mulford Co.)

occurs more frequently during the late summer and early fall. The period of incubation varies from four to twenty-one days.

SIGNS AND SYMPTOMS: The onset is gradual, beginning with headache which persists and does not yield to treatment, weakness, vague pains throughout the body, epistaxis and a disinclination for work or pleasure. This condition lasts from a few days to one to two weeks, when the temperature becomes slightly elevated and is accompanied by increased pulse rate,

coated and tremulous tongue, nausea, hurried breathing, flushed face, with distention of the abdomen, enlargement of the spleen and the characteristic eruption of rose-colored spots which appear from the seventh to the ninth day of the disease, being more abundant on the abdomen, chest and back. In the second week the above signs and symptoms are exaggerated and this is followed by the third week, during which time the fever begins to decline and all symptoms gradually grow less pronounced. A relapse may occur at this stage when the temperature again becomes elevated, but not as high as in the early part of the attack.

Fig. 115.—Rose spots in typhoid fever. The three spots upon the face are rather unusual. (Sahli, Kinnicutt and Potter).

This elevation of temperature persists for a week or ten days and is accompanied by the return of the other symptoms,—but in a milder form. If a relapse does not follow the receding temperature, convalescence is established. Diarrhea or constipation may be present. The urine is usually reduced in amount and is often albuminous, while much emaciation exists with coma and delirium in severe attacks. The Widal test for typhoid fever is the reaction shown by the blood when a fresh bouillon-culture of the typhoid bacillus is added to it.

DIFFERENTIAL DIAGNOSIS: *Acute Miliary Tubercu-*

losis is more often mistaken for typhoid fever than any other disease. In this form of tuberculosis, the temperature curve which

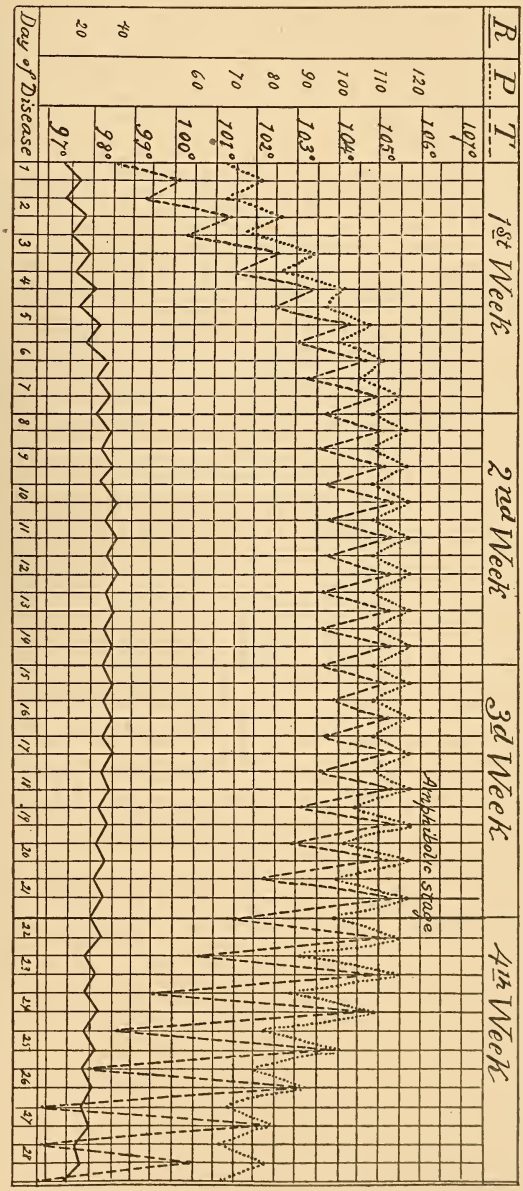


Fig. 116.—Temperature, pulse, and respiration curve in typhoid fever. (Sahli).

is characteristic of typhoid fever is not present, while the curve of miliary tuberculosis is more irregular. No rash appears in tu-

berculosis, the Widal reaction is absent, while pulmonary symptoms are more marked and tubercles can be detected by an opthalmoscopic examination of the retina.

Meningitis is diagnosed from typhoid fever by the abrupt onset with early cerebral symptoms, including photophobia, vertigo, cerebral vomiting, hyperesthesia and delirium together with irregular fever, leukocytosis and the absence of abdominal symptoms, the characteristic rash and the Widal reaction.

Ulcerative Endocarditis may be thought to be a beginning attack of typhoid fever, but the former generally exists as a complication to some other disease. It is characterized by precordial pain and heart murmurs, irregular fever, rigors, leukocytosis and the absence of any rash and no reaction when the Widal test is applied to the blood.

Catarrhal Enteritis is sometimes confused with typhoid fever, but in enteritis there are colicky pains, nausea, vomiting, and when diarrhea supervenes, the stools are greenish-yellow in color and contain undigested food. Enteritis sometimes has an eruption of isolated spots resembling those of typhoid fever and time alone must serve to make the diagnosis. This disease, however, does not show the Widal reaction, which practically eliminates typhoid fever when it is not present.

COMPLICATIONS: *Hemorrhage* is one of the most frequent complications of typhoid fever and generally occurs during the third week, being indicated by a sudden fall of temperature and the passage of free blood by the rectum or dark red tarry stools. It denotes a sloughing ulcer and if not fatal, prolongs the period of disability.

Perforation followed by peritonitis is generally a fatal complication when it occurs during the course of this fever. It is indicated by a sudden fall of temperature, localized pain and tenderness with marked tympanites and shock.

Relapses often occur during an attack of typhoid fever and each relapse prolongs disability for at least the length of time the relapse requires and usually longer, on account of the severe weakness and emaciation which it produces.

Pneumonia is a frequent complication and when it supervenes late in the disease, the period of disability is prolonged thereby, provided recovery eventually follows.

SEQUELAE: *Tuberculosis of the Lungs* sometimes develops in persons predisposed to this disease who have suffered from an

attack of typhoid fever, which is followed by a slow and prolonged convalescence.

Nephritis or a subacute inflammation of the kidneys may remain as the result of typhoid fever and prolong disability indefinitely.

HOUSE CONFINEMENT in aborted cases of this disease lasts from 1 to 2 weeks. Special health policies in which typhoid fever is specified as one of the diseases for which indemnity is payable, are differently interpreted by the many companies as to liability when an individual has suffered from an aborted case of typhoid fever as certified by the attending physician; some companies holding that aborted typhoid fever is not typhoid fever in the meaning of the policy. Mild cases of this disease require from 4 to 6 weeks of house confinement and in severe ones, when there has been one or more relapses, confinement to bed and the house may last from 10 to 12 or 14 weeks and sometimes even longer.

TOTAL DISABILITY depends on the severity of the disease. Aborted cases of typhoid fever usually require from 2 to 3 weeks of total disability. The average case of this disease demands from 6 to 8 or 10 weeks. In a moderately severe case in which the complications are limited and one relapse only occurs, total disability of from 10 to 12 weeks is not uncommon. Very severe cases of this fever complicated by one or more complications and several relapses require from 12 to 16 weeks or more of total disability.

PARTIAL INDEMNITY FOR TOTAL DISABILITY if payable by the policy in addition to house confinement may require from 1 to 2 weeks in mild cases; from 3 to 6 weeks in moderately severe ones and in very severe cases with a history of complications, from 4 to 8 or 12 weeks of this form of disability may be necessary.

EFFECTS: Individuals having suffered from typhoid fever in which complications have been absent or slight, are insurable for all kinds of insurance from six to nine months after complete recovery. Severe cases in which total disability has lasted from three to six months or more, would not be insurable for life or health insurance until one to two years after complete recovery had taken place. Accident insurance, however, could be safely written in the majority of such cases three months after the date of recovery. While an individual is recovering from a mild attack of typhoid fever, insurance companies do not often cancel

a health policy, but permit it to remain in force. If a severe attack, however, has been suffered, health insurance is generally cancelled and not rewritten until as above stated. When accident insurance is in force on any one recovering from an attack of typhoid fever, it is seldom disturbed by an insurance company.

TYPHUS FEVER

SYNONYMS: Jail fever; ship fever; contagious fever; spotted fever; putrid fever; camp fever; exanthematic typhus; petechial typhus; typhus siderans.

INFORMATION: Typhus fever is an acute, contagious disease occurring in epidemics and supposed to be due to a germ which is yet undiscovered. Predisposing causes are the drinking of impure water, eating improper foods and breathing foul air in overcrowded tenements. It is more common in the continental

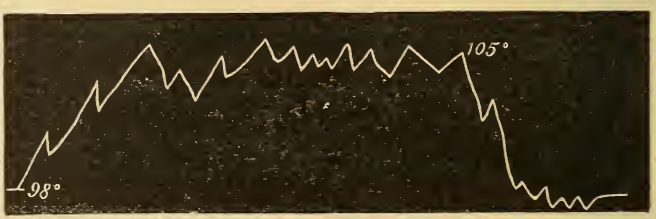


Fig. 117.—Temperature-chart of typhus fever. (Stevens).

countries and is seldom seen in the United States—except in seaports. The period of incubation is four to twelve days, usually the latter.

SIGNS AND SYMPTOMS: The onset of an attack of typhus fever is sudden, beginning with a chill and pain in the head, back and limbs, rapid pulse, fever reaching 104° to 105° F., within two to three days and extreme prostration. From the fifth to the seventh day of the disease, an eruption resembling measles appears over all parts of the body with the exception of the face which is of a dusky hue. The urine is scanty and albuminous and in some cases nervous symptoms are prominent. At the end of the second week if recovery takes place, the temperature falls by crisis and rapid convalescence is established.

DIFFERENTIAL DIAGNOSIS: *Typhoid Fever* is differentiated from typhus fever by the gradual onset of the disease, the characteristic temperature curve, the later appearance of the

eruption which is scanty and limited to certain parts of the body, tympanites and the Widal reaction which is present in the majority of typhoid fever cases.

Cerebro-Spinal Meningitis is hard to differentiate from typhus fever, but in cerebro-spinal meningitis the pain in the back and rigidity of the muscles are greater, vomiting is more common, the fever is more irregular, prostration less severe and the eruption appears at different times and is not characteristic.

Measles is a much milder disease and is marked with catarrhal symptoms, while the eruption appears earlier and is confined to the face.

COMPLICATIONS: *Pneumonia* not infrequently follows an attack of typhus fever and when this disease supervenes, total disability is increased.

Swelling of the Parotid Glands may follow this fever, but unless suppuration ensues disability is not prolonged thereby.

HOUSE CONFINEMENT lasts from 3 to 7 days in severe cases of typhus fever, at the end of which time a fatal termination occurs. The average case ending in recovery requires from 2 to 4 weeks of house confinement. When complications such as pneumonia, suppuration of glands, nephritis or neuritis occurs, house confinement is prolonged according to the length of time required by the complication for recovery.

TOTAL DISABILITY in severe cases which terminate by death, is seldom over 10 days. Cases in which recovery follows, require from 3 to 6 weeks of total disability when uncomplicated. If complications occur, disability is prolonged according to the complication.

PARTIAL INDEMNITY FOR TOTAL DISABILITY if payable by the policy after the termination of house confinement, requires from 1 to 3 weeks in average uncomplicated cases. If complications are present, from 2 to 6 weeks of this form of disability are necessary.

EFFECTS: When a history of an attack of typhus fever is elicited in an insurance application, all forms of insurance must be denied the individual until at least six to nine months have elapsed after complete recovery, and even at that time no form of life or health insurance should be issued without a favorable report from a medical examination.

YELLOW FEVER

SYNONYMS: Yellow Jack; sailors' fever; Mediterranean fever; black vomit; bilious malignant fever; typhus icterode.

INFORMATION: Yellow fever is an acute, infectious, paroxysmal disease usually occurring in three stages, the febrile, the remission and the collapse. It is a disease of the tropics and is more common in the seaports and during the summer months and is caused by a specific micro-organism which gains access to the system through the bites of certain mosquitoes—the Stegomyia fasciata. This fever generally occurs in epidemics which cease with the beginning of frost. It is more prevalent in the white race than in the negro and usually one attack confers immunity against others. The period of incubation is from a few hours to seven days, although rarely this time is extended to two weeks.

SIGNS AND SYMPTOMS: The first stage commences slowly with headache, loss of appetite and malaise, or suddenly with a chill followed by pains in the head, limbs, epigastrium and back, with a temperature which rapidly increases until it reaches within a few hours 104° to 106° F. This febrile stage lasts from one to three or four days and is followed by a rapid fall in temperature and marked remission of all other signs and symptoms. This is the stage of remission in which convalescence may be established or the third stage, the stage of collapse follows in from a few hours to two or four days. The stage of collapse is characterized by persistent vomiting of dark blood,—black vomit,—suppression of urine, hemorrhages into the mucous membrane and jaundice. The pulse is feeble, skin cold, respiration irregular, the mind remaining clear until the end which occurs from exhaustion within a few hours to one or two days.

DIFFERENTIAL DIAGNOSIS: *Dengue* is sometimes mistaken for yellow fever, but in the former there is intense headache with severe aching pains in the joints and muscles and often a rash. The remission which occurs in dengue is followed by lessening of the symptoms instead of an aggravation as in yellow fever, which is characterized by early albuminuria, black vomit and jaundice; these being absent in dengue.

Remittent Fever is diagnosed from yellow fever by the absence of black vomit, yellow discoloration of the skin, enlargement of the spleen, multiple remissions and the detection by the microscope of the hematozoa of Laveran in the blood.

Acute Yellow Atrophy of the Liver is distinguished from yellow fever by a slight elevation of temperature or the entire absence of the fever, marked nervous symptoms, decrease in the area of hepatic dullness, and the presence of albumin, bile, tube casts, leucin and tyrosin in the urine.

COMPLICATIONS are rarely seen, although lymphangitis and phlebitis may occur as complications and prolong disability.

HOUSE CONFINEMENT depends on the severity of the attack and the character of the disease existing in the epidemic which is occurring at the time cases are seen. Severe cases cause house confinement of from 1 to 2 or 3 days only when death occurs. Attacks less severe and those followed by recovery require from 3 to 10 days of house confinement.

TOTAL DISABILITY in early fatal cases is never more than from 1 to 3 days and unless a health or disability policy pays indemnity for disability under one week, such cases are not entitled to any indemnity. Individuals who suffer from a moderately severe attack which is followed by death are totally disabled from 1 to 2 weeks; if recovery takes place total disability lasts from 2 to 4 weeks.

PARTIAL INDEMNITY FOR TOTAL DISABILITY if payable by the policy after the termination of house confinement requires from 1 to 2 or 3 weeks; this time depending on the physical condition of the person when the attack occurs, the severity of the disease and the exhaustion which follows.

EFFECTS: Individuals who recover from attacks of yellow fever are not insurable for any kind of insurance until four to eight months after complete recovery.

CHAPTER XX

MISCELLANEOUS DISEASES

ASCITES

SYNONYMS: Hydro-peritoneum; peritoneal dropsy; dropsy of the abdomen.

INFORMATION: Ascites is a collection of fluid in the peritoneal cavity. It is due to diseases of the heart, lungs, kidneys, liver and pressure within the abdominal cavity.

SIGNS AND SYMPTOMS: The onset of this condition is gradual, beginning with swelling of the abdomen, constipation, decreased urinary flow and symptoms referable to the organ causing the ascites. On palpation of the abdomen, a wave-like impulse is imparted to the hand when tapping is made on the opposite side. Percussion shows dullness on the sides of the abdomen; this area of dullness being altered when a changed position is assumed by the individual. A tympanitic note is elicited over the intestines which float on the fluid.

DIFFERENTIAL DIAGNOSIS: *Distention of the Bladder* may be mistaken for general ascites, but in the former there is a history of the passage of a small amount of urine or absolute retention, with tenderness and dullness over the bladder. The passing of a catheter relieves the condition and shows the correct diagnosis.

Ovarian Tumors are diagnosed from ascites by the fact that when a tumor is present the enlargement is at first unilateral and is detected by bimanual palpation. If an ovarian tumor exists dullness is elicited over the tumor and resonance is found on the sides. An altered position does not change the area of dullness or the situation of the tumor.

Pregnancy shows a history of the absence of menstruation, increase in size of the mammæ with a darker areolæ surrounding the nipples, the character and position of the enlargement, together, at the proper time, with fetal heart sounds.

Chronic Peritonitis is marked by a history of chronic inflammation of the abdomen with general pain, tenderness and vomit-

ing and is associated with a chronic disease such as cancer or tuberculosis existing in the abdominal cavity or some other part of the body.

COMPLICATIONS: *Diseases of the Liver, Lungs, Heart, Kidneys* or other organs generally complicate ascites, and when this condition is claimed as the cause of disability, it is almost invariably true that a chronic disease is existing in some part of the body and is the primary cause.

HOUSE CONFINEMENT does not exist in this condition unless the collection of fluid in the abdominal cavity becomes so large that motion is interfered with, when house confinement is necessary until the fluid is removed by aspiration. This time should not be more than 1 to 2 weeks.

TOTAL DISABILITY of 1 week should be sufficient in all cases of ascites which produce disability from the collection of fluid alone, as the majority of persons suffering with this condition are also suffering from a disease of some of the other organs and the above time is ample for aspiration and the period following before recovery is sufficient to enable part of the occupation being resumed.

PARTIAL INDEMNITY FOR TOTAL DISABILITY if payable by the policy after the termination of house confinement, is not allowable for this condition alone, but may be necessary on account of the co-existing disease of some other organ of the body and this time depends on the disease and organ involved.

EFFECTS: Individuals suffering with ascites are not insurable for any kind of a policy. If a history of such a condition has existed previous to the time of application and was apparently cured, each case would have to be considered separately and a decision rendered according to the history elicited.

CHOLERA

SYNONYMS: Asiatic cholera; malignant cholera; epidemic cholera; spasmodic cholera.

INFORMATION: Cholera is an acute, infectious disease usually occurring in epidemics, but more common in the tropics than in other parts of the world and is due to a specific micro-organism—Koch's comma-bacillus,—which gains access to the body through the taking of impure foods and water. Epidemics occur more frequently in summer than in winter and all ages are

affected; the old, however, being more susceptible. The period of incubation is from three to five days.

SIGNS AND SYMPTOMS: Typical cases of cholera which are followed by recovery, are characterized by three stages—the preliminary diarrhea, stage of collapse and stage of reaction. Rapidly fatal cases lack the latter stage. The first stage usually begins gradually with headache, coated tongue, excessive thirst, chilliness, slight pain in the abdomen with diarrhea and weakness, but some cases begin suddenly with the above symptoms severely marked. The stage of invasion may last from two to five days, when convalescence may be established or the second stage or collapse follows, in which the thirst becomes more intense, mus-

Fig. 118.—Spirillum of Asiatic cholera, from a bouillon culture three weeks old, showing long spirals. × 1000 (Frankel and Pfeiffer).

cular cramps occur in the calves of the legs and other parts of the body, projectile vomiting is seen and the stools which resemble rice-water, rapidly increase in number and amount. The skin is cold and clammy and covered with perspiration; the surface temperature is greatly depressed, but if taken in the rectum it may show 102° to 103° F. or more. The urine is extremely scanty and contains sugar and albumin. Consciousness is usually retained until near the end. This stage lasts from a few hours to one or two days when death generally occurs, although in some cases convalescence is established at this late period of the disease. If the stage of reaction ensues the vomiting ceases, evacuations from the bowels become less frequent, the pulse increases

in strength and the surface temperature becomes normal or nearly so. The quantity of urine is increased in amount and the individual begins to take more interest in his surroundings.

DIFFERENTIAL DIAGNOSIS: *Cholera Morbus* in the beginning stages might be mistaken for cholera in localities where this disease was epidemic, but in cholera morbus there is usually a history of indiscretion in diet, the prostration is not so great and a microscopic examination of the discharges would soon eliminate cholera.

Acute Toxic Gastro-Enteritis is distinguished from cholera by the mildness of the attack, the character of the evacuations from the bowels and the absence of cramps in the legs and collapse in the early stages.

COMPLICATIONS: *Acute Nephritis* generally complicates an attack of this disease, but when present total disability is not prolonged.

Pneumonia and Pleurisy may occur in the later stages of an attack of cholera and if either of these complications are present, disability is lengthened.

Suppuration of the Parotid Gland not infrequently follows an attack of cholera and when it occurs, disability is prolonged thereby.

Ulcers and Abscesses in different parts of the body are not uncommon in cases of this disease which have recovered and when present, the period of disability is lengthened according to the location of the abscess or ulceration, the severity and physical condition of the individual.

HOUSE CONFINEMENT in rapidly fatal cases of cholera lasts from 1 to 2 or 3 days only, but in those which go on to recovery and are uncomplicated, house confinement of 1 to 2 weeks is usually sufficient. Cases in which many complications are present, together with extreme prostration following the disease, are confined to the house from 3 to 4 or 6 weeks and sometimes longer.

TOTAL DISABILITY in fatal cases seldom lasts more than from 3 to 7 days. If recovery ensues in a case of average duration of this disease, total disability of from 3 to 4 weeks is demanded. Severe cases of cholera which are complicated and followed by much emaciation and weakness, require total disability of from 4 to 8 or 10 weeks and sometimes longer.

PARTIAL INDEMNITY FOR TOTAL DISABILITY if payable by the policy after the termination of house confine-

ment may require from 3 to 6 or 10 weeks; this time depending on the severity of the attack, the resulting physical condition, the occupation and the season of the year.

EFFECTS: When a history of an attack of cholera is elicited in an insurance application, such an individual is uninsurable for life or health insurance until one to two years after complete recovery. Accident insurance, however, may be safely written from two to three months after recovery is said to have been complete.

DIABETES MELLITUS

SYNONYMS: Glycosuria; melituria.

INFORMATION: Diabetes mellitus is a chronic disease that occurs at all ages, but more frequently between twenty-five and fifty years. It is more common in males than in females and is especially frequent in the Hebrew race and is rare in negroes. The origin of this disease is unknown, although a number of theories are advanced as to the probable cause of it,—among which are the disorders of the renal or nervous system, the brain, liver and excesses of various kinds.

SIGNS AND SYMPTOMS: The onset of diabetes mellitus is insidious, beginning with the passage of an increased amount of urine, normal or subnormal temperature, thirst, loss of flesh and strength with increased appetite, headache, etc. As the disease advances, there is "muscular weakness without cause, emaciation, thirst, hunger, loss of sexual power" (Musser) and excessive amounts of urine are voided daily. This fluid is pale in color with a specific gravity of 1030 to 1050, of a sweetish taste, aromatic odor and containing grape sugar. Great thirst with fissures of the tongue and much loss of flesh and strength are noticed. Acute exacerbations occur during the progress of this disease and cause disability for a short time.

DIFFERENTIAL DIAGNOSIS: *Diabetes Insipidus* is differentiated from diabetes mellitus by the fact that the specific gravity of urine in the former ranges from 1001 to 1007 and sugar is absent from the blood and urine.

Simple Glycosuria may be mistaken for diabetes mellitus, but in the former sugar in the urine is not constant, only occurring at intervals and most often in those past fifty years of age. The reduction of copper in Fehling's solution takes place when grape sugar is present in the urine of diabetics.

Reduction of Fehling's Solution by urine may follow when an individual has been under the influence of chloroform or is taking chloral. The majority of coal tar products such as phenacetin, acetanilid, etc., reduce this solution and sometimes excitement or head injuries produce the same results.

COMPLICATIONS: *Bright's Disease* is a frequent complication existing in persons suffering with diabetes mellitus. In such cases, unless an acute exacerbation of either disease occurs, total disability is not often present until near the termination of the life of the individual, but when it does follow under such conditions it usually lasts until a fatal ending occurs.

Pulmonary Tuberculosis often exists in conjunction with this disease and unless the tuberculous process is advanced, it alone does not cause disability.

Boils, Carbuncles, Pruritus and other skin diseases are frequent complications present in persons suffering with diabetes. If these complications occur, they often cause periods of disability and lead to the diagnosis of the original disease.

Atrophy of the Retina, or the formation of a soft cataract not uncommonly follows in persons suffering with the above disease.

Diabetic Coma may occur at any time in an individual suffering with diabetes; in which case disability is present during the progress of the disease and may terminate in death.

HOUSE CONFINEMENT does not occur when diabetes mellitus exists unless an acute exacerbation takes place or coma supervenes, when 1 to 2 weeks are generally sufficient. If the disease is nearing its termination, from 2 to 4 or 6 weeks may be necessary.

TOTAL DISABILITY in all classes of risks lasts from 2 to 4 weeks, when an acute exacerbation or an attack of diabetic coma occurs. In chronic cases where the disease has been existing for some time, total disability of from 4 to 12 weeks and sometimes more, is often necessary for the period covering the last illness of the individual.

PARTIAL INDEMNITY FOR TOTAL DISABILITY if payable by the policy after the ending of house confinement in acute attacks of diabetes mellitus may require from 1 to 2 weeks.

EFFECTS: Life or health insurance would be written by the majority of insurance companies after several examinations of the urine had been made and that excretion found normal in persons under thirty years of age with a history of diabetes when the disease existed during childhood but had been cured for ten or

fifteen years. Accident insurance could be issued to young adults with a history of diabetes mellitus, provided the disease has been cured for three to five years. All forms of insurance would usually be denied a person with a history of diabetes mellitus which had existed when the individual was between twenty and thirty years or over.

ERYSIPELAS

SYNONYMS: St. Anthony's fire; erysipelatous dermatitis; the rose.

INFORMATION: Erysipelas is an acute infectious disease caused by the Streptococcus Pyogenes. This disease manifests itself by a localized inflammation of the skin and systemic symptoms. It is more common in those whose physical condition is poor and one attack predisposes to another. The face and neck are the parts most often involved. The period of incubation is from three to seven days.

SIGNS AND SYMPTOMS may come on gradually with chilliness, slight fever, tingling in the parts about to be affected and enlargement of the glands adjacent to the localized inflammation. Usually, however, an attack of erysipelas begins suddenly with a chill, followed by increased temperature which soon reaches 103° to 105° F., rapid pulse, pain in the head and limbs, sometimes nausea, vomiting and the eruption which most frequently begins around the nose and spreads to other parts of the face, these parts becoming swollen, tense, glazed and of a crimson hue. Small vesicles sometimes develop and these may coalesce forming blisters of a large size. The eruption is accompanied by pain in the parts affected, with tingling and heat. This condition persists for four or five days, when the redness and swelling begin to subside, desquamation follows, the pain becomes lessened, the temperature falls by crisis and convalescence is established in the majority of cases. Relapses, however, are frequent in this disease and may occur at this stage.

DIFFERENTIAL DIAGNOSIS is not difficult in this disease, as there is frequently a history of exposure to infection, the eruption appears early and most often affects the face and surrounding parts and is accompanied with burning, tingling and high fever with scanty and albuminous urine. An important point in the diagnosis of erysipelas is the abrupt termination of

the swelling; this is marked by a ridge at the margin of the inflammation and is easily distinguished by palpation.

Herpes Zoster of the face and forehead may be mistaken for erysipelas, but in the former the eruption is limited by the median line, the vesicles appear with the neuralgic pain and the red edematous appearance follows the vesicles, while in erysipelas the eruption is not limited by the median line. the pain is not neu-

Fig. 119.—Swelling of the face in erysipelas. (Eisendrath).

ralgic in character and the vesicles follow the redness and swelling.

COMPLICATIONS are not frequent following an attack of erysipelas, although meningitis, pneumonia and pleurisy may occur. If the inflammation involves the neck, edematous laryngitis may result. Thrombosis affecting the capillaries of the brain sometimes complicates or follows an attack of this disease. This is also true of the sinuses within the skull.

HOUSE CONFINEMENT in an average case of erysipelas in all classes of risks lasts from 1 to 2 weeks. Very severe attacks

of this disease may cause house confinement of from 2 to 3 weeks and in either case, this time may be increased from 2 to 5 days when the attack occurs in winter and house confinement terminates during inclement weather.

TOTAL DISABILITY generally lasts from 2 to 3 weeks, although severe attacks require from 3 to 4 weeks before the occupation can be resumed. Complications would prolong disability according to the time required for the complication.

PARTIAL INDEMNITY FOR TOTAL DISABILITY if payable by the policy after the ending of house confinement may require from 1 to 2 or 3 weeks; this time depending on the physical condition of the individual, the occupation and the severity of the disease. Usually, however, as soon as house confinement ends the occupation can be resumed.

EFFECTS: Uncomplicated cases of crysipelas produce no untoward effects. Therefore insurance of all kinds can be issued from two to four months after complete recovery. Good underwriting, however, would demand that a waiver be placed on a health policy eliminating indemnity for this disease,—if the application was accepted within two to three years following an attack.

GOUT

SYNONYMS: Podagra,—gout in the foot;—gonagra,—gout in the knee;—chiragra,—gout in the hand.

INFORMATION: Gout is a general disease involving different joints of the body; those of the foot and especially the ones in connection with the great toe being most often affected. The disease is usually inherited and is more common in middle and advanced life, and in the male sex who have indulged in the excessive use of wines and malt liquors or overeating of rich articles of diet.

SIGNS AND SYMPTOMS: The paroxysm of an acute attack of gout is usually preceded several days by prodromes such as restlessness, irritability of temper, insomnia, dyspepsia and the discharge of scanty high-colored urine. The paroxysm itself begins suddenly, shortly after midnight and is characterized by great pain in the affected joint, this is soon followed by redness, heat, swelling and extreme sensitiveness. As daylight approaches, the pain becomes less acute and the individual usually falls asleep. During the following day the pain in the joint in-

volved is more or less severe and as night returns another paroxysm ensues, although of lessened severity. This routine persists for four or five days when convalescence is established. During the above described attack, the temperature is moderately elevated, running from 101° to 102° F., the pulse is quickened and corresponds to the temperature.

DIFFERENTIAL DIAGNOSIS: *Acute Articular Rheumatism* is sometimes mistaken for an attack of gout, but in the former the disease generally affects the larger joints of the body, the duration is longer and there is a marked tendency to the successive involvement of the larger joints. Acid sweats are common in rheumatism and prostration is more severe.

Rheumatoid Arthritis is not easily differentiated from gout. This disease, however, more often affects the joints of the fingers and is more common in females than in males. It is a disease of long standing which produces a gradual enlargement of the parts involved, accompanied by pain and rigidity.

COMPLICATIONS are often seen in connection with gout; this being due to the fact that the disease is more common in persons of middle and advanced age and in those who have lived a more or less fast life which has had its effects on the various organs of the body. Among the most frequent complications are hypertrophy of the heart, arterio-sclerosis, nephritis and sometimes chronic diseases of the skin.

HOUSE CONFINEMENT in an acute attack of gout usually lasts from 3 to 7 or 10 days. When it occurs in persons who are well advanced in life and a number of previous attacks have been suffered, house confinement of 1 to 2 weeks may ensue.

TOTAL DISABILITY in the average case which has not been preceded by a number of previous attacks lasts about 1 week. Severe ones which have a history of recurrences in individuals advanced in age, require total disability of from 1 to 2 or even 3 weeks.

PARTIAL INDEMNITY FOR TOTAL DISABILITY if payable by the policy after the termination of house confinement may demand from 3 to 5 or 7 days in the average case. When following very severe attacks, from 1 to 2 weeks of this form of disability—if payable—may be necessary.

EFFECTS: If a history of one or more attacks is elicited in an individual well advanced in life, insurance of all kinds must be denied such a person. When only one attack has occurred

and all other things are equal, life insurance can be safely written if a medical examination proves the individual an average risk. Accident and health insurance can also be issued to such a person, but an insurance company would place a waiver on a health policy eliminating indemnity for disability following an attack of gout if the history of such an attack is elicited as occurring within one to three years previous to the date of application.

HYDROPHOBIA

SYNONYM: Rabies.

INFORMATION: Rabies is an acute specific infectious disease involving the central nervous system, occurring in certain animals and transferred to the human race by bites, when it becomes known under the name of hydrophobia. The bite from an animal suffering with this disease produces hydrophobia in the person bitten, the poison being found in the saliva, blood and fluid of the spinal cord of the rabid animal.

SIGNS AND SYMPTOMS: When hydrophobia follows the bite of a rabid dog or other animal similarly affected, it usually develops in from three weeks to three months after the wound has been inflicted, first showing itself by a restlessness, depression of spirits, slight difficulty in swallowing and pain in the unhealed wound or scar, with slight fever and increased pulse rate. This condition lasts for a few days, when clonic spasms involving the muscles of the larynx supervene and are caused by the sight of water or the drinking of it. After one to three or four days,—during which time there is moderate fever with an excessive discharge of saliva from the mouth and delirium,—the convulsions cease, the individual lying motionless in a semi-conscious condition. This stage persists for twelve to thirty-six hours and terminates in death in almost every case.

DIFFERENTIAL DIAGNOSIS: *Hysteria*, with a history of a bite from an animal must be differentiated from a true attack of hydrophobia. Hysteria almost invariably occurs in women and in attacks which simulate hydrophobia there are attempts at biting, the woman usually barks, but clonic spasms involving the muscles of the throat are not induced by swallowing or the sight of water.

HOUSE CONFINEMENT lasts from 3 to 10 days; the disease almost invariably terminating fatally.

TOTAL DISABILITY is generally the length of house

confinement, although it may be preceded by from 1 to 3 or 5 days of this form; in which case from 3 to 10 or 14 days of total disability may be necessary.

PARTIAL INDEMNITY FOR TOTAL DISABILITY if payable by the policy in addition to house confinement seldom follows an attack of this disease. Should recovery take place, however, this form of indemnity would require a variable time, from 1 to 2 or 4 months.

EFFECTS: If a history of an animal bite is elicited and especially if the animal is thought to have suffered from rabies, such a person would be uninsurable for any kind of a policy until one to two years had passed after the bite was inflicted, unless the Pasteur method of treatment had been taken. In the latter case, all kinds of insurance may be safely written from one to three months after the treatment was ended.

PAROTIDITIS

SYNONYMS: Mumps; parotitis.

INFORMATION: Parotiditis is an acute, contagious disease affecting one or both of the parotid and salivary glands. It is due to a specific poison and is more commonly seen in male children than in females, although adults are not immune. One attack usually confers immunity. Incubation varies from one to three weeks.

SIGNS AND SYMPTOMS: An attack of this disease begins with chilliness, moderate fever running from 101° to 103° F., quickened pulse, headache and stiffness at the angles of the jaw, followed by swelling of the parotid gland. As the swelling increases and involves the side of the face, pain appears and becomes more marked on movement of the jaws. This condition lasts for a few days when the gland of the opposite side generally becomes involved and the same routine is repeated. Sometimes metastasis occurs and swelling of the mammæ or testes results; in which case disability is prolonged.

COMPLICATIONS: *Orchitis* is the most frequent complication and when it occurs it is almost invariably seen in adults; thus prolonging the period of disability one to two weeks.

Other complications such as suppuration of the gland, impairment of hearing and pneumonia sometimes follow.

HOUSE CONFINEMENT in individuals suffering with this disease lasts from 5 to 7 days, when one gland only is in-

volved. If the gland of the opposite side becomes affected several days after the first, house confinement of from 7 to 10 days is necessary. If orchitis develops, house confinement is prolonged from 1 to 2 and sometimes 3 weeks; this latter time depending on the severity of the infection of the testes.

TOTAL DISABILITY in the average case of mumps affecting one side of the face only, seldom lasts more than 7 days. When the glands of both sides are involved, total disability of from 10 to 14 days may be required. If metastasis follows and swelling of the testes occurs, total disability of from 2 to 4 weeks is sometimes necessary in such cases.

PARTIAL INDEMNITY FOR TOTAL DISABILITY if payable by the policy after the termination of house confinement, is not often required in this disease, but if so, from 4 to 7 days are usually ample.

EFFECTS: When an adult has suffered from an uncomplicated attack of mumps involving either of the parotid glands, insurance of all kinds can be issued from two to four weeks after complete recovery. If metastasis has occurred and a complete recovery ensues, the risk is desirable for all kinds of insurance, but if atrophy of one or both testes follows, such a condition would at least require a medical examination before any kind of a policy was issued.

PERITONITIS

SYNONYM: Inflammation of the peritoneum.

INFORMATION: Acute peritonitis is an acute inflammation of the peritoneum resulting from infection caused by penetrating wounds of the abdomen or perforating wounds of some of the organs of the peritoneal cavity, the extension of an existing inflammation involving one or more organs of the abdominal cavity and general infections, such as tuberculosis, septicemia, erysipelas, etc. Exposure is sometimes said to be the cause of an acute peritonitis.

SIGNS AND SYMPTOMS in the acute variety appear suddenly beginning with a chill, elevation of temperature from 101° to 103° F., increased pulse rate, shallow breathing with abdominal tenderness and localized pain which soon becomes very intense and general. The individual voluntarily lies on the back with the legs drawn up, thereby relaxing the abdominal muscles as much as possible; thus attempting to relieve the severe pain

which exists. The abdomen is distended and its contents are protected by rigid abdominal walls, tympanites is present, constipation exists and vomiting usually occurs. A subnormal temperature is often seen in this disease.

DIFFERENTIAL DIAGNOSIS: *Rheumatism of the Abdominal Muscles* may simulate peritonitis, but in the former the history of a disease or accident that might result in peritonitis is absent, the temperature is not so high, neither is the pulse as rapid and symptoms of collapse do not follow.

Acute Enteritis rarely produces rigidity of the abdominal walls; the tenderness is less marked than in peritonitis, the pain is colicky in character and diarrhea is present, while in peritonitis constipation usually exists.

Acute Gastritis due to a corrosive poison generally has a history of the ingestion of such a drug. The severe pain which is present is limited to the stomach and upper part of the abdominal cavity, the vomiting is early and severe and collapse supervenes in fatal cases very quickly.

Intestinal Obstruction is characterized by absolute constipation, not even wind being expelled per rectum. The fever is not as high and tenderness is less intense, while the vomiting which first consists of the contents of the stomach soon becomes stercoraceous.

Biliary Colic is differentiated from peritonitis by the fact that in the former the pain is excruciating, is paroxysmal in character and when relief ensues it comes instantly. Jaundice of more or less intensity is also present.

Renal Colic should rarely be confused with peritonitis. In this form of colic the pain is situated over the region of the kidneys and is referred in the male to one of the testes which becomes retracted; in addition the urinary secretion is altered, oftentimes containing blood and albumin.

Hysterical Distention of the Abdomen is generally seen in the female sex, when the abdomen is swollen and the pain and tenderness which are claimed as present, disappear if the attention of the patient is distracted. Fever rarely occurs when this condition is met with and the pulse is not characteristic of peritonitis. A few whiffs of chloroform quickly relieves the abdominal distention when due to hysteria.

HOUSE CONFINEMENT is extremely uncertain when peritonitis exists and depends on the cause and treatment. Cases suffering with a general diffuse peritonitis resulting from a punc-

tured wound of the abdominal wall or rupture of some of the abdominal organs, seldom live longer than from 2 to 7 days. Peritonitis which becomes more or less diffuse but which yields to treatment, may require house confinement of from 2 to 3 or 4 weeks. When peritonitis is due to an injury and is followed by an operation and recovery, from 4 to 6 or 8 weeks of house confinement are necessary.

TOTAL DISABILITY in cases which terminate fatally seldom require more than 1 week. If recovery follows without an operation having been performed, from 2 to 4 or 5 weeks are usually necessary. When this condition requires an operation and recovery ensues, total disability lasts from 4 to 6 or 10 weeks and sometimes longer.

PARTIAL INDEMNITY FOR TOTAL DISABILITY if payable by the policy in addition to house confinement usually demands from 1 to 2 or 4 weeks; this time depending on the cause of the disease, the severity, the treatment and the physical condition of the individual.

EFFECTS: If a history of peritonitis exists and is the result of an accident or rupture of some of the abdominal organs due to an acute disease or injury, life or health insurance would not be issued until six to twelve months after complete recovery had ensued, and not even then unless a medical examination showed the individual to be suffering from no untoward effects. Accident insurance can generally be accepted on a person with such a history from three to six months after recovery is said to be complete. If tuberculosis or a malignant growth has caused the peritonitis, such an individual would not be accepted for any kind of insurance.

ACUTE ARTICULAR RHEUMATISM

SYNONYMS: Inflammatory rheumatism; rheumatic fever; rheumatism.

INFORMATION: Acute articular rheumatism is a disease usually affecting the large joints of the body. It is more frequently seen in occupations requiring exposure and is more common in the temperate zone and in early life; the majority of cases occurring between the ages of fifteen and forty years. The exact cause of this disease is not known, but the predisposing causes are exposure to cold and wet. One attack renders the individual more prone to subsequent ones.

SIGNS AND SYMPTOMS vary in their severity. The disease generally manifests itself with chilliness or a chill, sore-throat, pain, stiffness and swelling in the joints about to be affected, thirst, nausea, vomiting and elevation of the temperature, this soon reaching 102° to 103° F., and scanty, high-colored, acid urine which is albuminous. As the disease advances, the joints become greatly enlarged, swollen, reddened, hot to the touch and exquisitely tender, the slightest touch or movement causing excruciating pain. Profuse acid sweats are present during these attacks, later swelling, pain and tenderness subside in the joints involved and other joints become swollen and painful. If both ankles have been affected early, the disease may affect both knees or both shoulders, or if one knee and one ankle were early involved the inflammation may disappear in these joints and the opposite ankle and knee become affected.

DIFFERENTIAL DIAGNOSIS between rheumatism when it is affecting one joint only and a sprain or contusion is not difficult, although a rheumatic joint may have a history of injury a short time previously. In acute articular rheumatism the enlargement of the joint is uniform and completely encircles it, while in a contusion the swelling is confined mostly to the exact point injured. Tenderness is exquisite at all places in a rheumatic joint while with a contusion the tenderness is greatest over the torn ligaments. Fluid is found in some of the larger joints in contusions, while in rheumatism it is usually absent. Discoloration appears after contusions and not after rheumatism, while complications involving the heart are frequent in conjunction with this disease, but never follow sprains or contusions.

Acute Rheumatoid Arthritis is best differentiated from acute articular rheumatism by its course and after effects. It usually affects the small joints, leaving permanent impairment and deformity and is not accompanied with acid sweats or lesions of the heart.

Gonorrheal Rheumatism shows a history of gonorrhea and generally involves one joint only, usually the knee. It is of longer duration than acute articular rheumatism, does not yield to salicylates and if a culture is secured, gonoccocci are found to be present in the synovial fluid.

Septic Arthritis usually involves one joint at a time and later is followed by suppuration; this latter almost never occurring in acute articular rheumatism. Septic arthritis is generally the

complication of a septic process in some other part of the body and is accompanied by a hectic temperature.

Acute Periostitis simulates rheumatism when this condition occurs in close proximity to a joint, but in the former the swelling is less intense and the tenderness and heat when accurately located are not found to be in the joint. Fluctuation over a circumscribed area shows the presence of pus in periostitis and this does not occur in rheumatism.

Gout should not be mistaken for acute articular rheumatism. In the former the joints of the great toe are most frequently attacked and the disease first shows itself in the early morning hours. High fever and acid sweats with a tendency to heart complications are absent.

COMPLICATIONS: *Endocarditis, Pericarditis and Myocarditis* are the most frequent complications of this disease and when they occur, disability is greatly prolonged in cases in which recovery ensues.

Pneumonia, Bronchitis and Pleurisy are complications of this disease, occurring in ten to fifteen per cent of cases.

HOUSE CONFINEMENT in the average uncomplicated case of acute articular rheumatism lasts from 2 to 4 weeks. If a complication involving the heart occurs or the lungs become affected, house confinement is increased according to the length of time required for the complication and sometimes even longer, on account of the individual being in poor physical condition when complications ensue.

TOTAL DISABILITY in preferred risks whose occupation does not necessitate exposure, lasts from 3 to 6 weeks in the average uncomplicated case. In other lower classifications in which more or less exposure is necessary in the occupation, total disability of from 4 to 8 weeks is often required. If a complication involving the heart or lungs or other organs of the body occurs, this form of disability is prolonged according to the time required for the complication and on account of the pre-existing disease, from 1 to 2 or 3 weeks more are usually demanded.

PARTIAL INDEMNITY FOR TOTAL DISABILITY if payable by the policy in addition to house confinement, generally requires from 2 to 4 weeks; this time depending on the severity of the attack, the number and situation of the joints involved, the severity of the complications—if any—and the exact duties of the occupation.

EFFECTS: An individual having one or more attacks of

acute articular rheumatism is uninsurable for a life policy until three to six months or more have elapsed after the termination of the last attack and a medical examination shows the heart and other organs to have been unimpaired by the disease. Health insurance in such cases can be issued from three to six months after the termination of the last attack and the medical examination shows the heart to be normal, but good underwriting would demand that a waiver be placed on the policy eliminating indemnity for this disease. Accident insurance is commonly written as soon as recovery takes place, but an accident policy should not be issued unless a medical examination has been made and the heart found to be normal.

MUSCULAR RHEUMATISM

SYNONYMS: According to the location; cephalodynia, torticollis or wry-neck; pleurodynia, lumbago or lumbodynia.

INFORMATION: Muscular rheumatism is an inflammatory condition of the voluntary muscles of the body and is known by the above names, according to the location of the muscles involved. It is more commonly seen in the male sex in advanced adult life and most frequently affects the lumbar muscles; often being due to exposure to dampness or direct draught of cold air. One attack predisposes to others and individuals who are subject to gout more frequently suffer with this disease.

SIGNS AND SYMPTOMS: An attack of muscular rheumatism is often sudden in onset, frequently occurring while the individual is bending over and as an attempt is made to resume the upright position, intense pain is felt in the lumbar region. Stiffness follows in the affected muscles, with tenderness and agonizing pain on the slightest movement. Sometimes the muscles are contracted and rigid, when pain is constant; usually, however, if the affected muscles are kept at absolute rest, pain is slight or absent. When the occipito-frontal muscles are involved, the muscles of the eye may be affected; in which case movement of the eyeball causes increased pain. If the muscles of mastication are affected, the act of chewing makes the pain more intense. When the thoracic muscles are involved, deep breathing, coughing or sneezing aggravates the pain.

DIFFERENTIAL DIAGNOSIS: *Sprain* of the back is often claimed as the cause of disability when in reality it is due to lumbago. The differential diagnosis, therefore, between these

two conditions is very important to an insurance company. If an individual is disabled by muscular rheumatism and carries an accident policy only, he of course is not entitled to indemnity, while if a general health or disability policy is carried and disability is due to lumbago, the policy may provide a limited sum for such disability. When a sprain of the back is the cause of disability, a distinct history of injury is obtainable, the disability begins slowly and gradually becomes worse so that within twenty-four to thirty-six hours it is well marked. Discoloration may or may not be present, pain is referred to a special point over the spinal column or the muscles of the back and tenderness exists at these points when pressure is made over them. There is no elevation of temperature and no complications such as would indicate a rheumatic condition being present.

Lumbago in contra-distinction may be present on one side only, it comes on suddenly with no history of an accident or strain. Tenderness and pain extend over a larger area, no discoloration follows, the temperature is elevated and frequently other manifestations of rheumatism are present in some other part of the body.

Cephalodynia must be differentiated from neuralgia of the trifacial or occipital nerves. In the latter disease there is pain and tenderness at the points where these nerves emerge from the skull and also following their course. The muscles of the head are not involved in neuralgia and movement does not aggravate the condition.

Pleurodynia may be mistaken for pleurisy or intercostal neuralgia. In pleurisy, evidence of this disease is apparent on percussion and auscultation, while in intercostal neuralgia the pain follows the course of an intercostal nerve and external evidence is often seen in an attack of herpes.

Progressive Muscular Atrophy should not be diagnosed as muscular rheumatism, because in this disease the history of a gradual onset lasting for weeks or months is present. Fibrillary contractions is an early symptom and wasting of the muscles with loss of power, pallor, coldness and impairment of sensation are present, and these symptoms are not seen in muscular rheumatism.

HOUSE CONFINEMENT in cases of muscular rheumatism involving the muscles of the chest or back usually lasts from 3 to 7 days in preferred risks and from 1 to 2 weeks in ordinary ones Severe cases of this form of rheumatism affecting the lumbar muscles sometimes cause house confinement of from 2 to 3

weeks and this is especially the case when attacks closely succeed one another.

TOTAL DISABILITY of 1 to 2 weeks is most often demanded in attacks of muscular rheumatism. Cases with a history of very severe attacks of this disease require from 2 to 4 weeks of this form of disability. When recovery from this disease takes place during inclement weather, the length of total disability is prolonged from 3 to 5 days.

PARTIAL INDEMNITY FOR TOTAL DISABILITY if payable by the policy after the termination of house confinement, does not often require more than 1 to 2 weeks.

EFFECTS: Individuals with a history of having suffered attacks of muscular rheumatism involving any of the muscles of the body, are uninsurable for health insurance, unless a waiver is placed on the policy eliminating indemnity for this disease. Accident or life insurance, however, can usually be safely written from one to two months after complete recovery takes place. On account of a wrong diagnosis in many cases of muscular rheumatism, insurance companies frequently pay indemnity under accident policies for this disease, when it is claimed by the attending physician that a sprain of the back caused the disability. It is therefore necessary that not only a competent physician, but one who is constantly on the alert for such a condition, be employed when a claimant alleges a sprain of the back as the cause of disability.

SMALLPOX

SYNONYM: Variola.

INFORMATION: Smallpox is an acute contagious disease usually occurring in epidemics, although sporadic cases may be prevalent at all times. It is supposed to be due to a germ, but as yet no one has succeeded in isolating the cause. The poison is extremely tenacious and may produce an attack after remaining in articles of apparel for a long time. Practically every one is susceptible to the disease unless protected by vaccination or a previous attack which usually confers immunity, but not always. The period of incubation is from ten to fourteen days.

SIGNS AND SYMPTOMS: Smallpox first manifests itself by a sudden chill or chilliness, accompanied by vomiting, increased temperature which soon reaches 103° to 104° F., rapid,

full and strong pulse, ranging from 100 to 130 beats per minute, redness of the face with injection of the conjunctiva, sleeplessness, constipation, headache, sometimes convulsions and delirium and severe pains in the back which are almost never absent. This condition continues until the third day of the disease when a characteristic eruption first appears on the forehead at the line of the hair and on the wrists, consisting of coarse red spots, which feel

Fig. 120.—Discrete small-pox in an unvaccinated girl. Eighth day of eruption. (Welch and Schamberg).

like small particles of shot beneath the skin; about this time the fever abates and the patient is more comfortable and contented. These spots pass through successive stages and become papules, vesicles and pustules and finally break and discharge and in time are covered by a crust or scab, which begins to drop off from the seventeenth to the twenty-first day, leaving a red depressed surface which in time becomes a white cicatrix. Convalescence

is then established and is completed as soon as all scabs or crusts become separated from the body.

Confluent Smallpox is marked by the coalescing of the pustules and extreme gravity of all other signs and symptoms.

Malignant, hemorrhagic or black smallpox is characterized by hemorrhage into the pustules and is rapidly fatal.

Varioloid or modified smallpox is shorter and milder than the ordinary disease and is not attended with the secondary fever.

DIFFERENTIAL DIAGNOSIS: *Varicella* should not be mistaken for smallpox, as this disease is almost entirely confined to children; constitutional symptoms are mild, the rash appears on the first day, becoming vesicular within a few hours and does not go on to pustulation and disappears within three to five days. In suspicious cases the presence of a vaccination mark would serve to make the diagnosis almost positive.

Syphilis in the pustular form during the second stage, is sometimes mistaken for smallpox by experts; the two resembling each other so closely in some cases. In the former, however, there is usually a history of infection, mucous patches are present and the fever is slight. Such cases are sometimes only diagnosed by the course of the disease.

Measles may be mistaken for smallpox, but in the former the eruption is smooth, and crescentic in shape, the temperature does not fall on its appearance as it does when the eruption of smallpox takes place. In measles marked coryza and cough are present, while absent in smallpox.

Typhus Fever is characterized by sudden onset with a marked chill and high temperature, and the latter is not affected by the appearance of the eruption on the fourth or fifth day as it is in smallpox. The eruption in typhus fever is macular and petechial, while in smallpox it is pustular and later umbilicated.

COMPLICATIONS involving the eyes, lungs or throat are frequent, but seldom prolong disability unless occurring near the termination of the disease, when the length of disability is increased according to the time usually demanded by the complication.

HOUSE CONFINEMENT lasts from 3 to 4 weeks in mild cases of this disease. If the attack is severe, from 4 to 6 weeks and sometimes longer are necessary and this is especially true if some of the complications develop towards the ending of the disease, when disability is generally prolonged for the length of time required for recovery by the complication.

TOTAL DISABILITY in malignant cases seldom lasts more than from 5 to 10 days when death takes place. Mild cases require from 4 to 6 weeks and when the infection has been severe from 6 to 10 or 12 weeks are often necessary. Complications such as ulcerative keratitis, ulcerative laryngitis, pneumonia and pleurisy prolong the period of disability according to the complication.

PARTIAL INDEMNITY FOR TOTAL DISABILITY if payable by the policy after the termination of house confinement, in the majority of cases does not demand more than from 1 to 3 weeks; this time depending on the severity of the attack.

EFFECTS: Insurance of all kinds can be issued to individuals with a history of having suffered an attack of smallpox, from four to six months after complete recovery ensues.

CHAPTER XXI

DISABILITY DUE TO POISONS AND GASES

PART I

MINERAL POISONS

Poisoning from mineral or vegetable acids, other vegetable poisons, alkalies and gases not uncommonly occurs and results either in disability or death. Corrosive acids and alkalies when taken in concentrated form are followed immediately by signs and symptoms referable to the poison taken, and in such cases death usually occurs quickly. When these acids or alkalies are taken into the system in a diluted form, evidence of the poison may not show until some hours afterwards and generally only disability follows, but in some cases if enough of the diluted poison is taken death results.

Vegetable poisons are often swallowed in overdoses and produce toxic effects. This happens most frequently when the drug is taken intentionally and does not often occur accidentally. Some of these poisons act very quickly and are followed at once by the usual evidence of the poison having been swallowed. In other cases where the action is delayed on account of the non-absorption or dilution of the drug, signs and symptoms may not ensue until some hours after the poison has been taken in a toxic dose.

Alkalies when swallowed in the concentrated form are almost invariably followed at once by evidence of the poison, although as with diluted mineral and vegetable acids, diluted alkalies may not produce any untoward symptoms at once, but nevertheless if taken in sufficient quantity, poisoning results.

Gases are either inhaled intentionally or by accident and in either case if breathed sufficiently long and undiluted by air, death almost invariably occurs and usually within a very short time. Some gases which produce death are odorless, while others are readily distinguished by the smell. Disability or death often results from the inhalation of fumes from acids or alkalies

and usually these fumes are inhaled by accident. Poisoning not uncommonly follows from constant exposure to certain drugs which are inhaled or absorbed by the skin or mucous membrane. When chronic poisoning results from the above causes or from the constant voluntary taking of certain poisonous drugs in minute quantities, disability more or less pronounced and prolonged may ensue.

Accident insurance policies sometimes pay a specific amount for death due to the accidental swallowing or inhalation of poisonous drugs, but under such circumstances an insurance company makes a rigid investigation to make sure that the drug was accidentally taken. When an individual swallows a drug for medicinal purposes and an overdose is taken either through his mistake or that of another party, an insurance company would not pay a death indemnity should a fatal termination occur, for the reason that the drug is voluntarily swallowed, even though it may prove to be a toxic amount. A disability policy, however, in such cases would cover the period of total disability should the individual be prevented from attending to his occupation under the terms of the contract. When a person takes a poisonous drug intentionally in a sufficient quantity to produce death, accident insurance policies sometimes provide a fixed sum as a death benefit.

In the following articles the period given for house confinement, total and partial disability and partial indemnity for total disability is stated with the supposition that the taking of a poisonous substances into the system, either by way of the alimentary canal or by inhalation, has been accidental in origin.

ANTIMONY

SYNONYMS: Tartar emetic; potassium and antimony tartrate; tartrated or tartarized antimony; butter of antimony; Kermes mineral.

INFORMATION: Antimony is frequently taken in poisonous amounts, but on account of the vomiting which it produces in overdoses, the stomach is usually relieved of the poison and fatal effects do not occur. This drug is a gastro-intestinal irritant and also a strong cardiac depressant. It is said that with an adult a fatal dose has been as small as two grains, but generally to produce death a dram must be taken. If more than this quantity is swallowed, vomiting takes place at once. Antimony can

be applied externally, when it produces a papular eruption and if continued sufficiently long, destruction of the skin and underlying tissues occurs, together with symptoms of poisoning. Salts of antimony often contain arsenic as an impurity and this latter poison may complicate the former in some cases.

SIGNS AND SYMPTOMS: When a poisonous dose of this drug has been swallowed, signs and symptoms usually appear within one-half hour. There is first a metallic taste in the mouth and this is followed by nausea with violent retching and vomiting, accompanied by burning heat and pain in the mouth, throat and stomach. In addition the skin becomes moist and relaxed and this feeling of relaxation extends all over the body. Intense thirst is present, with a feeble rapid pulse, subnormal temperature and extreme prostration. Respirations are very shallow and irregular. The urine is usually increased in amount but occasionally suppression occurs; it may or may not contain blood and sometimes is passed with considerable pain and difficulty. Purging occurs early and consists of first the contents of the intestines and this is followed by mucus and bile; blood very rarely being found in this discharge. The evacuations soon become very numerous and are known as "rice-water stools" resembling in this respect the discharges from a cholera patient. In cases where death does not take place for several days a pustular eruption may occur on the body, resembling that produced when the drug is applied externally.

Chronic poisoning by antimony produces symptoms of constant nausea, with vomiting and purging, loss of appetite and muscular power, weak pulse, sweating, depression and finally collapse to be followed by death from exhaustion. When death from any of the salts of antimony occurs, it follows great depression of the circulatory and respiratory functions.

DIFFERENTIAL DIAGNOSIS: *Arsenical Poisoning* sometimes complicates poisoning by antimony, as arsenic is often an impurity of this drug; being produced during its manufacture. Arsenic is also a gastro-intestinal irritant and causes practically the same signs and symptoms as antimony, but arsenical poisoning can be differentiated from poisoning by this drug by the fact that in the former the stools always contain blood, while in the latter it is rarely found. The mucus contained in the evacuations of arsenical poisoning is usually in shreds, being stripped off the inside of the intestines, while in antimonial poisoning these shreds do not appear. Arsenical poisoning has a distinct remis-

sion in the signs and symptoms, in which the individual appears to have started towards recovery; this is not present when antimony has been taken. A chemical analysis of the organs of the body—especially the liver—will show arsenic, while antimony is usually excreted by the bowels and kidneys.

Asiatic Cholera is hard to differentiate from antimonial poisoning when an epidemic of the former is existing. They both resemble each other, but cholera is generally accompanied by cramps in all the muscles of the body, whereas in poisoning by antimony these cramps appear only in the calves of the legs. Cholera is caused by the comma bacillus of Koch which can be shown to exist in the discharges from the intestines.

HOUSE CONFINEMENT in cases which terminate fatally after this drug has been swallowed, seldom requires more than from 1 to 7 days. If an excessive dose is taken and ejected and recovery follows, house confinement of 1 to 2 weeks is usually sufficient.

TOTAL DISABILITY following the accidental swallowing of antimony in which recovery ensues, requires in the majority of cases from 2 to 3 weeks. If death follows a fatal dose, total disability almost never demands more than 7 days, but this time is unimportant, because a policy that would cover an accidental death from this drug would pay the face of the policy only and not total or partial disability in addition.

PARTIAL DISABILITY due to the gastro-intestinal irritation which results from the taking of this drug may persist for some time and require from 2 to 4 or 6 weeks of this form of indemnity.

EFFECTS: When a history of accidental antimonial poisoning exists, insurance of all kinds would be denied such an individual until at least one to two years after the date of poisoning, for the reason that a chronic gastro-intestinal irritation is present and fatty degeneration of the organs of the body may be progressing.

POSTMORTEM APPEARANCES: The mucous membrane of the mouth, throat, stomach and small intestines is usually inflamed and softened, dark viscid mucus is found adherent to the mucous membrane of the intestines. The lining of the stomach may be infiltrated with blood and sometimes shows a pustular eruption. The brain, lungs and some of the organs of the abdominal cavity are congested and if death has not followed immediately, the liver generally shows fatty degeneration and

this may be found in other organs. When death occurs from chronic poisoning, the large intestine reveals evidence of a long standing inflammation.

ARSENIC

SYNONYMS: Poisoning by Paris green; rough on rats; Scheele's green (copper arsenite).

INFORMATION: Poisoning from arsenic itself is seldom seen, but arsenical poisoning—as it is commonly called—is always due to one of its various salts; arsenious acid is the one most commonly used in the arts and therefore the one most frequently taken accidentally or with suicidal intent. It is the poisonous part of Paris green and rough on rats and as these two substances can be purchased without any trouble, poisoning by intent is often the result of the taking of one of these preparations. Arsenic will produce symptoms of poisoning whether taken internally or applied to the mucous membrane and also the skin, if sufficient time is allowed for its absorption. A fatal dose of this drug varies, but usually two to three grains will produce death within a few hours or a few days. If larger quantities are taken, vomiting generally occurs and if enough has not already been absorbed recovery takes place.

SIGNS AND SYMPTOMS when a poisonous dose of this drug has been swallowed usually show themselves within a half to one hour, although they may not appear until from six to ten hours. Arsenic being a gastro-intestinal irritant produces a burning sensation in the throat, with nausea, violent vomiting and purging. The evacuations from the bowels consist first of the contents of the intestines and then become the characteristic "rice-water stools" with the exception, however, that they contain blood. The burning sensation in the throat soon becomes a severe pain in the throat, stomach and intestines; intense thirst is present, together with frontal headache, dizziness, photophobia and usually, general prostration. The respirations are shallow and painful, the pulse feeble, of low tension, irregular and increased in frequency. The urine is scanty and sometimes suppression occurs. If death does not take place within twenty-four to forty-eight hours, a remission of all the signs and symptoms occurs and oftentimes a favorable prognosis is given. This interval, however, is soon followed by a return of the pain, vomit-

ing, purging, etc., and death generally occurs on the fourth or fifth day, ending by convulsions or coma.

Chronic poisoning which is produced when small doses are taken intentionally or administered by another party by intent results in anorexia, thirst, pains in the abdomen, diarrhea, headache, sleeplessness, puffiness beneath the eyes and a cutaneous eruption which resembles herpes zoster. In addition to the above there is nervous irritability, loss of weight, sometimes a tingling sensation in the extremities, falling out of the hair and impairment of the mental faculties. Pigmentation sometimes occurs and persists. The kidneys are usually affected in chronic poisoning, showing a diminished excretion of urine which often contains blood and albumin.

DIFFERENTIAL DIAGNOSIS between arsenical and antimonial poisoning and cholera is considered under the previous article—Antimony.

HOUSE CONFINEMENT is extremely short in fatal cases of acute poisoning by this drug; sometimes not lasting over a few hours. The usual period, however, is from 1 to 5 days; when recovery ensues, from 1 to 2 weeks are generally sufficient. Chronic cases in which the drug has been administered unknown to the individual cause house confinement of from 1 to 2 or 4 weeks before death takes place.

TOTAL DISABILITY is short following acute cases of poisoning by arsenic and rarely lasts more than from 2 to 4 or 6 days when a fatal termination occurs. If recovery follows, total disability of from 1 to 2 or 3 weeks is usually demanded. Chronic cases of poisoning in which the drug has been taken for some time until finally disability ensues, generally require from 2 to 4 or 6 weeks of this form before the occupation can be partially resumed or a fatal termination follows.

PARTIAL DISABILITY would only be allowable where a non-fatal dose of this drug has been taken accidentally, and in such cases from 1 to 2 or 3 weeks are usually sufficient.

EFFECTS: If recovery takes place after acute arsenical poisoning, such a person is uninsurable for any kind of insurance until at least one to two years have elapsed from the date of recovery, on account of the fatty degeneration which may follow poisoning from this drug. Cases of chronic poisoning whether taken intentionally or administered by unknown parties would render the individual uninsurable for any kind of a policy until

two to four years have elapsed and no untoward effects are shown to exist by a medical examination.

POSTMORTEM APPEARANCES: Arsenic exerts its principal effects on the stomach and bowels, whether taken internally or absorbed through the skin. The mucous membrane is inflamed and detached in spots, this inflammation extending into the small and large intestines. The colon and often the rectum show evidence of a violent inflammation with ulcers of the mucous membrane of the rectum. The inflammation is more marked in the stomach, when death from acute poisoning occurs. When death follows within a few days, small red spots of inflammation are found in the stomach and these spots usually contain arsenic. The blood is of darker color than normal and the liver and kidneys show fatty degeneration. When arsenic has been taken into the body, putrefactive changes are greatly retarded and the drug can be detected in most of the organs of the abdominal cavity; the liver especially containing a considerable quantity.

BISMUTH

INFORMATION: This drug is said to have caused death in some few cases when taken internally or used as an external dressing. It is believed, however, that in these cases the bismuth was contaminated with arsenic, lead or mercury and these drugs produced the symptoms and caused the death.

SIGNS AND SYMPTOMS produced by bismuth in poisonous doses are gastro-intestinal in character with a metallic taste in the mouth, dark discoloration of the tongue, tenderness of the gums and diarrhea. The urine in fatal cases contains albumin and casts.

DIFFERENTIAL DIAGNOSIS: When bismuth is claimed as causing signs and symptoms of poisoning, impurities which may contaminate it must be eliminated and usually when this process is taken up, the drug is found to contain arsenic, lead or mercury. Therefore, symptoms of poisoning from bismuth are generally referable to the impurity which may be found existing.

HOUSE CONFINEMENT when poisonous doses of bismuth have been taken last from 1 to 2 or 3 weeks; this time depending on the amount and character of the impurities which the drug contains.

TOTAL DISABILITY in poisoning from bismuth gen-

erally lasts from 2 to 3 weeks when recovery takes place sufficiently for the occupation to be at least partially resumed. Fatal cases from poisoning by this drug are extremely rare and in one that has been reported, death occurred within nine days.

PARTIAL DISABILITY is not often deserved following poisoning from bismuth unless the period of disability has been short, when 1 to 2 weeks of this form may be allowed in some cases.

EFFECTS: After recovery from reported cases of bismuth poisoning in which the period of disability has been short, insurance of all kinds can be safely issued six to twelve months later.

CARBOLIC ACID

SYNONYMS: Poisoning by creosote; phenol; phenic acid; phenylic alcohol.

INFORMATION: Carbolic acid is perhaps more frequently used as a means of suicide than any other poisonous drug. It is cheap and easily procured and when taken in sufficient quantities produces death within a very short time. The commercial carbolic acid—which is the form employed—consists of crystals dissolved in water or glycerine. A fatal dose of this drug varies, but usually if an ounce of impure acid is swallowed death takes place immediately or within a few hours. Children are more susceptible to the poisonous effects than are adults and in the latter if a poor physical condition exists, a smaller quantity of the acid will produce fatal results.

SIGNS AND SYMPTOMS: Carbolic acid is one of the most rapidly acting poisons known and may produce death when taken in a sufficient quantity within a few minutes; in such cases the cause is respiratory failure. When a fatal termination does not occur at once, a severe gastro-intestinal irritation results and shows itself by burning in the mouth, throat and stomach to be followed by violent vomiting and purging. All the signs and symptoms of collapse are present, such as cold, sweating skin, weakened pulse, shallow and painful respirations. Contraction of the pupils, with a slow reaction to light and insensibility of the cornea exist. The urine is passed with difficulty in a lessened amount and occasionally entirely suppressed, it is of a dark green color and this becomes more marked on standing; the color, however, is not due to blood, but to a chemical compound.

DIFFERENTIAL DIAGNOSIS: The odor of carbolic acid

is usually detected when the drug has been swallowed, although it may not be perceptible. Wherever the acid comes in contact with the skin or mucous membrane, it produces an eschar which is pathognomonic. The mucous membrane is corrugated and of a white color if the pure drug has been taken. If impure the membrane is corrugated, but stained black. These eschars have a white center which is surrounded by a red and inflamed area. This white center sometimes becomes dark brown or black. A dark green, smoky urine, with the characteristic eschars, contracted pupils and profound insensibility are sufficient to make the diagnosis of carbolic acid poisoning.

HOUSE CONFINEMENT in fatal cases rarely lasts long enough to be considered; death usually occurring from within a few minutes to 6 to 12 hours. If recovery follows, house confinement lasts from 1 to 2 or 4 weeks; this time depending on the amount of acid swallowed, the physical condition of the individual at the time it was taken, the rapidity with which treatment was instituted, the shock and the resulting effects on the throat, stomach and kidneys.

TOTAL DISABILITY is not payable under an accident policy when this drug is taken accidentally and death results, as the company if liable for any sum would be liable for the amount specified in the policy and not any indemnity for total disability. If recovery takes place, total disability of from 2 to 4 or 6 weeks is usually demanded; this time depending on the conditions enumerated under house confinement.

PARTIAL DISABILITY is often claimed when the period of total disability is ended and in some cases is deserved; when payable from 2 to 4 weeks are ample.

EFFECTS: When carbolic acid has been swallowed and recovery ensues, contraction follows wherever the acid has touched the mucous membrane. These contractures when involving the esophagus may produce stricture and thus render the risk uninsurable for any kind of insurance. If no effects are observable after two to four years have elapsed, insurance of all kinds could be considered.

POSTMORTEM APPEARANCES: The mucous membrane of the mouth, esophagus and stomach is corroded, whitened and easily removed. It may, however, be hardened and corrugated. The brain is congested, the blood darker, the bladder usually empty, if not, it contains a small quantity of smoky urine, and all the fluids of the body, including the blood, give off the

odor of phenol. Hare states that a peculiar croupous exudate is sometimes found in the bronchial tubes and Langerhaus has noted that in some of these cases, evidence of croupous pneumonia existed. Fatty degeneration of the organs may follow when death has been due to this poison. Rigor mortis follows early when death results from this cause and postmortem staining appears at once.

COPPER

SYNONYMS: Blue vitriol; blue stone.

INFORMATION: When indemnity is claimed for poisoning due to one of the salts of copper it is usually accidental in origin, for the reason that very few people attempt suicide with any of these salts. Accidental poisoning by this metal generally results from eating substances which have been cooked in copper or tinned-copper vessels. It is claimed that the copper itself is not poisonous, but when introduced into the stomach and acted upon by the gastric juice, a chemical reaction takes place and produces an irritant substance, which causes signs and symptoms of poisoning. Copper is often contaminated with arsenic and in such cases the illness is probably due to both poisons. The fatal dose of this poison is uncertain; large doses usually produce vomiting and thus recovery follows. One-half ounce of verdigris (impure acetate of copper) has produced fatal results, while one ounce of the sulphate has also resulted in death.

SIGNS AND SYMPTOMS begin within two to four hours after the ingestion of substances contaminated with copper. A coppery taste in the mouth is complained of and this is followed by nausea and vomiting; the vomited matter being of a blue or green color. Severe pain in the abdomen with flatulence and diarrhea are present in such cases. The character of the diarrhea is black or reddish-brown and is streaked with blood. Headache, dizziness, coldness of the extremities, with dyspnea and sometimes tetanic convulsions occur. The pulse is weak, feeble and rapid, while the urine is scanty and sometimes suppressed. Jaundice is frequently seen.

Chronic poisoning by copper produces emaciation, metallic taste in the mouth, anorexia, thirst, a sallow complexion, with cramps and colicky pains, vomiting and diarrhea with black or greenish stools streaked with blood The kidneys are affected, causing a lessened amount of urine to be excreted and sometimes

suppression results. Jaundice occurs and is said to be due to atrophy of the liver.

DIFFERENTIAL DIAGNOSIS: When a case of poisoning by copper is seen it is not difficult to make the diagnosis, as this drug imparts a blue or greenish color to the mouth and tongue and the vomited matter. When bile is vomited, it may resemble the color due to copper poisoning, but in such cases if aqua ammonia is added to it the color remains unchanged, while if the color is due to poisoning by copper it becomes a deep blue. The drug is a gastro-intestinal irritant and produces signs and symptoms similar to other drugs in the same class. In addition if the case does not terminate fatally within a few hours, jaundice appears and this sign is not frequent when other drugs are taken in poisonous doses.

HOUSE CONFINEMENT in fatal cases of acute poisoning by copper seldom lasts over 1 to 2 days; death in the majority of cases usually taking place within ten to twelve hours. Chronic poisoning may require house confinement of from 1 to 2 or 3 weeks.

TOTAL DISABILITY: When acute copper poisoning produces a fatal termination, it rarely requires more than 1 to 2 days. Non-fatal cases usually result in an acute gastro-enteritis and require from 1 to 2 weeks of this form of disability when it is positively known that the cause was acute copper poisoning. Cases of chronic poisoning are totally disabled from 2 to 4 weeks; this time depending on the amount of poison ingested, the effect it has had on the general physical condition, the occupation and the rapidity with which elimination can be effected by other drugs.

PARTIAL DISABILITY of 1 to 2 weeks is sometimes deserved in cases of chronic poisoning by copper.

EFFECTS: When recovery takes place after acute or chronic poisoning by copper, such a person is uninsurable for any kind of insurance until two to three years after complete recovery. Copper may produce atrophy or fatty degeneration of the liver and in some cases parenchymatous nephritis develops.

POSTMORTEM APPEARANCES are not especially characteristic. There is evidence of inflammation involving the gastro-intestinal tract, with a bluish discoloration of the mucous membrane of the esophagus, stomach and intestines. Perforation of the stomach and intestines has occurred when death was

due to poisoning by copper and small particles of this drug have been found adhering to the mucous membrane of the bowels.

HYDROCHLORIC ACID

SYNONYMS: Muriatic acid; spirit of salt.

INFORMATION: Hydrochloric acid as found in commerce consists of the gas dissolved in water and when pure it is colorless, but the commercial acid is usually of a yellowish color. Poisoning by this acid does not often occur, as exposure to the air results in fumes which attract attention and prevent the acid being taken accidentally. The smallest fatal dose on record is one-half ounce of the commercial acid.

SIGNS AND SYMPTOMS: In poisoning by this acid the corrosive action is not so marked as when some of the strong acids are used. There is severe burning pain in the mouth, throat and stomach, with violent vomiting of the contents of the stomach and shreds of mucous membrane; the vomited matter being decidedly acid in reaction. Thirst, rapid, feeble pulse, great prostration and sometimes suppression of urine occurs. If this acid has been quickly swallowed the fumes may be inhaled, when a violent cough and bronchitis are set up and this may produce death within a few minutes by edema and spasm of the glottis.

DIFFERENTIAL DIAGNOSIS: *Hydrochloric Acid* when swallowed produces a white discoloration of the skin and mucous membrane, but no corrosion occurs. When the acid is spilled on some part of the clothing the color is changed or destroyed, but the texture is not often ruined. White fumes are given off from the mouth and also from the vomited matter and the characteristic odor of the gas is easily detected.

Nitric Acid when ingested produces a violent gastro-intestinal irritation and white stains on the skin, mucous membrane of the lips and gums. These stains soon become yellow and then a reddish-brown. The vomited matter is yellow or orange color and gives off the odor of orange. When the acid has touched the clothing the spots are first yellow and then become a reddish-brown.

Sulphuric Acid also produces a violent gastro-enteritis, with an immediate destruction of the tissues with which it comes in contact. The vomited matter is black or brown and often includes portions of the muscular coat of the esophagus. Blood which may be vomited resembles coffee-grounds in appearance.

Sulphuric acid stains the lips and mucous membrane of the mouth a brown color; this, however, in the early stages may be white gradually turning to a dirty brown or black.

HOUSE CONFINEMENT in fatal cases lasts from 1 to 3 days and in non-fatal ones this period may be prolonged from 2 to 3 or 4 weeks; this time depending on the amount of acid swallowed, the degree to which the tissues have been destroyed and the physical condition of the individual before the acid was taken.

TOTAL DISABILITY lasts from 1 to 3 days in fatal cases, although if a sufficient quantity be taken death may ensue within a few hours. Cases of poisoning by hydrochloric acid which recover, are totally disabled from 2 to 4 or 6 weeks and sometimes longer. The period of total disability depends mainly on the amount of acid swallowed and the destruction of tissue which follows, together with the rapidity with which nature repairs the damaged parts.

PARTIAL DISABILITY is payable to individuals who recover after accidentally taking hydrochloric acid; in such cases from 2 to 4 weeks are generally considered sufficient.

EFFECTS: When this acid has been taken and recovery ensues, such a person is uninsurable for any kind of a policy until at least one to two years have elapsed after complete cessation of all symptoms, and even at this time if much destruction of tissue has occurred, it is questionable if any form of insurance should be issued on account of strictures of the esophagus which may exist.

POSTMORTEM APPEARANCES: Stains about the fingers, mouth and any other part of the body or clothing with which the acid has come in contact are usually yellowish-brown in color. The mouth and esophagus are also stained dark and sometimes the mucous membrane has been stripped off. The mucous membrane of the stomach may also be of a brown or yellow color and beneath evidence of inflammation is apparent. The glottis is swollen and inflamed and when the drug has been inhaled while being swallowed and a physician sees the case immediately, there may have been performed a quick tracheotomy. Disorganization of the tissues is not so pronounced as when some of the more corrosive acids have been taken.

HYDROCYANIC ACID

SYNONYMS: Prussic acid; Scheele's acid.

INFORMATION: Hydrocyanic acid is one of the most deadly, quickly acting poisons known and when taken internally it is done so in a solution which usually contains two per cent. only. It is a very volatile acid and the fumes from the drug cause death almost as quickly as when a fatal dose is swallowed. One dram of a two per cent. solution of this acid is sufficient to cause death. Two to four ounces, however, are generally required to cause a fatal termination. Prussic acid is one of the constituents of bitter oil of almonds; this oil containing from two to four per cent. of the drug. Scheele's acid contains about five per cent. of hydrocyanic acid and the official French preparation contains ten per cent. of this acid. Hydrocyanic acid is also found in the kernels of apples, plums and peaches; the latter containing the larger percentage. One and one-half ounce of peach kernels will yield about one grain of hydrocyanic acid and this amount is more than sufficient to cause death. Potassium cyanide is largely employed in certain lines of manufacture and poisoning from this frequently occurs; the signs, symptoms and postmortem appearances being the same as that produced by hydrocyanic acid. Three to five grains of potassium cyanide are usually fatal.

SIGNS AND SYMPTOMS: A small or non-fatal dose of hydrocyanic acid produces unconsciousness, shallow, irregular breathing, complete muscular relaxation, involuntary evacuations from the bladder and bowels and oftentimes violent convulsions and general paralysis. If a large fatal dose is taken, death may ensue before the full amount is swallowed and it almost always takes place within three to seven or ten minutes, rarely being postponed twenty to thirty minutes. When a fatal dose is swallowed the individual falls to the ground with a single gasp or shudder, the respirations being discontinued at once and froth tinged with blood oozing from between the lips; the jaws are firmly fixed, the pupils dilated and the eyeballs staring and protruding, the skin is cyanotic, involuntary evacuations occur, the pulse generally becomes weakened until it is imperceptible and muscular relaxation, with absence of all reflexes follows. If sufficient fumes of the drug are inhaled to produce a fatal termination, the signs and symptoms are the same as if the drug was taken internally.

DIFFERENTIAL DIAGNOSIS in fatal cases is never made until after death, for the reason that this occurs so rapidly that usually medical attendance never reaches a person until too late to be of any assistance. The odor of the acid is perceptible when

a case is seen shortly after it has been swallowed and helps the physician in forming an idea as to the cause of death.

Nitrobenzol produces symptoms similar to prussic acid, but as it also causes death as quickly, the diagnosis is unimportant for the purpose of treatment. After death the odor of nitrobenzol persists, while the detection of prussic acid by smell can only be done at once after opening the body.

HOUSE CONFINEMENT for persons who have taken a dose too small to produce death is short, not often lasting over 2 to 4 or 7 days. When a fatal termination occurs there is no house confinement, death taking place almost immediately in all cases.

TOTAL DISABILITY in cases which recover from a non-fatal dose of hydrocyanic acid rarely require more than 1 week. When a fatal termination occurs and is accidental in origin, an insurance company according to the wording of the policy would be liable or not for a specified amount. If the death is suicidal, the majority of insurance companies pay a fractional part of the face of an accident policy; there being a condition to that effect in the contract.

PARTIAL DISABILITY is never payable from poisoning by this acid as the individual is able to resume all the duties of the occupation as soon as part of them can be taken up.

EFFECTS: After a non-fatal dose has been swallowed or inhaled accidentally and recovery follows such a person would be insurable for all kinds of insurance three to six months after the date of accident, provided a medical examination showed the kidneys to be normal. If the drug was taken with suicidal intent and recovery followed, insurance of all kinds would be denied such an individual.

POSTMORTEM APPEARANCES: When death occurs from the ingestion of hydrocyanic acid the face is pale or cyanosed, the eyes open and staring, the pupils dilated and evidence of bloody froth is seen in the mouth; the jaws being tightly closed. The vessels of the head and neck are usually engorged with blood, the hands are clenched and sometimes bright red spots are seen scattered over the surface of the body. The odor of prussic acid is perceptible in many cases before an autopsy is performed and this odor can almost always be detected when the stomach is first opened, although it disappears quickly after the contents of the abdomen are exposed to the air. When not perceptible on the opening of these organs, it can sometimes be de-

tected when the skull is first opened. The venous system is engorged with blood and if death has occurred rapidly, the small arteries contain arterial blood and the large ones venous blood. All the organs of the body are found congested, the heart is soft and flabby, the mucous membrane of the stomach is inflamed and sometimes postmortem rigidity is excessive.

LEAD

SYNONYMS: Poisoning by lead acetate (Sugar of Lead); lead subacetate (Goulard's Extract); lead carbonate (White Lead, Ceruse).

INFORMATION: Lead or plumbum is a metal which is not poisonous in itself, but some of its salts are highly injurious and produce marked signs and symptoms when taken in poisonous doses. Poisoning by this drug is divided into the acute and chronic forms. Acute poisoning is due to the ingestion of quantities which produce the acute signs and symptoms, and chronic poisoning follows the slow assimilation of this drug during its manufacture or in the manufacture of articles which require its use. Acute lead poisoning is not often seen and when met with it is usually accidental. This drug is sometimes employed by criminals for the purpose of producing sickness or death in other individuals, but it is easily detected.

SIGNS AND SYMPTOMS: Acute lead poisoning when it occurs commences with a persistent, sweet, metallic taste in the mouth, thirst, headache and a sense of constriction in the throat. These symptoms come on within two to twelve hours and are followed by pain in the epigastrium, nausea and vomiting of the contents of the stomach and a milky fluid which contains white curds; these curds being due to the formation of insoluble lead chlorid by the action of the hydrochloric acid of the stomach. The pain in the epigastrium is more pronounced around the umbilicus and is usually relieved by pressure. The abdominal muscles are rigid, the urine is scanty or suppressed and muscular cramps of the calves of the legs, with neuralgic pains frequently occur. Constipation generally follows acute lead poisoning but when a movement of the bowels takes place, the stools are usually black; this color being due to the sulphide of lead. The pulse is at first rapid and tense, but soon becomes weak and compressible. In some instances collapse, coma and convulsions ensue and end the case.

Chronic lead poisoning begins insidiously, the symptoms being obscure and not easily traced to this drug. Indigestion with fetid breath, coated tongue, headache and colicky pains in the abdomen which center around the umbilicus and are relieved by pressure, are some of the early signs and symptoms of this form of poisoning. In addition there is obstinate constipation and when a movement does occur, the stools are white or clay color. The flow of urine is scanty or suppressed and the arterial tension is markedly increased. A characteristic and pathognomonic sign of this poisoning is the blue spots or line on the gums near the teeth. The gums in such individuals are tender and bleed easily and sometimes the teeth show a brownish discoloration. If exposure to the drug is not stopped, paralysis of the extensor muscles of the forearm occurs and results in "wrist drop." The muscles become atrophied and occasionally pain in the joints appears in this form of poisoning.

DIFFERENTIAL DIAGNOSIS of poisoning when supposed to be due to lead is partly made by the character of the pain and its location. Lead poisoning produces cramps or colic in the abdomen which center around the umbilicus and are relieved by pressure. Obstinate constipation, with the passage of clay colored stools, the blue spots or line on the gums and wrist drop are characteristic of this form of poisoning.

HOUSE CONFINEMENT following acute poisoning by lead is uncertain; lasting from 2 to 3 days to 1 to 2 weeks. A fatal termination, however, when it occurs usually does so within 2 to 7 days. Chronic poisoning causes house confinement of from 1 to 3 or 4 weeks; this time depending on the degree to which the individual has been exposed and the rapidity with which the system eliminates the poison.

TOTAL DISABILITY following cases of acute poisoning when a fatal termination ensues rarely requires more than 1 week. If recovery takes place, total disability of from 1 to 3 weeks is often necessary. Chronic poisoning by this drug would not be covered by an accident policy, and a health policy would only do so when the occupation of the individual was known to the company at the time the policy was issued. In such cases total disability of from 2 to 3 or 4 weeks is often required, when it finally ensues after prolonged exposure to lead and chronic poisoning results.

PARTIAL DISABILITY is not often payable to individuals

suffering with acute lead poisoning when it is accidental in origin. When payable, however, 1 week is usually ample.

PARTIAL INDEMNITY FOR TOTAL DISABILITY following chronic lead poisoning after the termination of house confinement may require from 1 to 3 or 4 weeks; this time depending on the emaciation and weakness which result from the poisoning and the rapidity with which the drug is eliminated and the normal physical condition regained.

EFFECTS: Individuals with a history of having suffered from acute lead poisoning which is accidental in origin, are insurable for all kinds of insurance from two to three months after complete recovery. When disability has resulted from chronic lead poisoning or repeated attacks of lead colic have taken place, an insurance company would not issue a life or health policy, although an accident policy might be granted by some companies.

POSTMORTEM APPEARANCES when death has been due to acute lead poisoning are not characteristic. There may be an inflammation of the gastro-intestinal tract, with a deposit of sulphid of lead on the mucous membrane causing a grayish appearance. When death has not occurred early, the colon is constricted and a blue line or spots appear on the gums. The blue line on the gums, however, may be absent in persons who are exceptionally careful about cleanliness of the mouth. If a death occurs from chronic poisoning, a blue line or spots on the gum —if present—is a characteristic and important sign, the colon is found constricted and thickened and a grayishness of the mucous membrane exists. The kidneys are contracted and show a fatty or granular degeneration. The extensor muscles of the forearm are atrophied and the elasticity of the arteries is greatly diminished.

MERCURY

INFORMATION: Poisoning by mercury is of two kinds,—that due to the mercuric salts which are corrosive in action and produce acute signs and symptoms,—and the mercurous salts which are generally the ones concerned in chronic poisoning. Acute poisoning is usually due to corrosive sublimate (bichlorid of mercury, mercuric chlorid) when this drug is swallowed accidentally or by intent. Accidental poisoning by corrosive sublimate frequently occurs and is due to the fact that when corrosive sublimate is dissolved in water and uncolored, the solution re-

sembles in every respect ordinary drinking water. Chronic poisoning by mercurous salts of mercury generally occurs to individuals who are exposed to this drug in the manufacture of articles which require its use. The smallest fatal dose of a mercuric salt is said to have been three grains; the average fatal dose being four to five grains.

SIGNS AND SYMPTOMS of acute poisoning by corrosive sublimate appear very quickly, usually beginning within one-half hour after the poison has been swallowed. A metallic taste is complained of, with a burning pain in the mouth, throat and stomach and this gradually extends over the abdomen and is increased by pressure; thirst with nausea and vomiting of blood-stained mucus and diarrhea occur; the stools being largely composed of blood and mucus. The urine is scanty or suppressed. The face is flushed and swollen, the pulse is rapid and wiry, dyspnea is present and sometimes the local effect of the drug on the mucous membrane is so great that edema of the glottis occurs and death quickly follows. The lips and tongue are white and shrivelled from the effects of the drug and its affinity for albuminoids.

Chronic poisoning is due to a slow absorption of the mercurous salts of mercury, either through the skin from mercurial ointments or the inhalation of fumes in which this drug is carried and by the alimentary canal when small repeated doses are given. The most important sign of chronic poisoning by mercury is ptyalism, this appearing several days after the drug has been taken. The flow of saliva is excessive and large amounts are secreted. In addition there is loss of appetite, metallic taste in the mouth, the teeth become loosened, the gums are swollen, tender, painful and ulcerated, and at the edge of the gums where they meet the teeth, a bluish-gray substance appears The breath is fetid and deterioration of the blood occurs, it becoming more fluid than normal. Sometimes this drug affects the nerve centers when a peculiar tremor first occurs in the upper extremities and gradually extends and involves all parts of the body. It is popularly known as shaking palsy. These tremors usually disappear when the individual is asleep. Death from chronic poisoning is generally preceded by convulsions and coma.

DIFFERENTIAL DIAGNOSIS: *Arsenical Poisoning* must be differentiated from that produced by mercury. In the former, the signs and symptoms rarely come on under an hour, for the reason that arsenic is less soluble than is mercury. Arsenic does

not produce the white shrivelled appearance of the mucous membrane and while the stools in poisoning from both drugs contain blood, those due to mercurial poisoning usually show larger quantities. Death from mercurial poisoning generally takes place within a shorter time than death due to arsenical poisoning. Examination of the urine, saliva and feces shows the presence of mercury which can be detected in the urine and saliva within three to six hours after being swallowed.

HOUSE CONFINEMENT in fatal cases of mercurial poisoning is short; death sometimes occurring within twenty-four hours. In the majority of cases, however, a fatal termination takes place within 1 to 5 days. Chronic cases of poisoning by this drug require from 1 to 2 or 3 weeks of house confinement; at the end of which time the individual is usually sufficiently recovered to be taken into the open air and kept there. Confinement to the house is not necessary in cases of chronic poisoning unless the symptoms come on acutely, when the above time is ample.

TOTAL DISABILITY following acute cases of mercurial poisoning seldom lasts over 7 days, as death usually occurs within that time. Should recovery take place, however, from 2 to 4 weeks are generally required before a part of the occupation can be resumed. When total disability is reported to have been caused by chronic mercurial poisoning, a close investigation of the claim must be made, for the reason that in the majority of cases the individual has mis-stated the occupation at the time application was made for the policy. If total disability follows chronic poisoning, from 2 to 4 or 6 weeks are necessary.

PARTIAL DISABILITY of 1 to 2 weeks is sometimes demanded in cases of acute poisoning which are accidental in origin. When chronic poisoning occurs, from 1 to 4 weeks may sometimes be required. Partial indemnity for total disability when due to chronic poisoning after the termination of house confinement, should not be allowed, because in the majority of cases the occupation has been the cause of the poisoning and it has been misstated in the application, thereby producing a breach of warranty.

EFFECTS: Acute cases of accidental mercurial poisoning which are not terminated by death, would not be considered insurable for life or health insurance until at least one year had elapsed after recovery was said to have been complete. The issuance of an accident policy to such a person would depend

greatly on the history of how the poisoning occurred. If the individual was shown to have been careless and the occupation was favorable to a recurrence of the same condition, accident insurance would not be granted. If these conditions were not present it could be safely issued from two to four months after complete recovery. Chronic poisoning usually leaves the individual in impaired health, a number of teeth remaining loose, causing the food to be poorly masticated and indigestion results. Such cases would not be considered for life or health insurance until at least one year after all signs and symptoms due to poisoning had disappeared.

POSTMORTEM APPEARANCES: Acute cases of poisoning followed by death from corrosive sublimate show an inflamed condition of the mouth, throat, stomach and intestines; the mucous membrane of the mouth and throat being white or gray and corroded; this corrosion extending into the intestines sometimes as far as the colon. Small hemorrhages not uncommonly occur beneath the mucous membrane of the stomach and ulceration has occasionally been found. If death does not occur for several days, the lower part of the small intestines, together with the colon, often shows a higher degree of inflammation than does the stomach and is covered by a diphtheritic-like membrane. When a fatal termination follows chronic poisoning by this drug the gums are found to be soft and spongy, with or without a bluish-gray line on them and the teeth loosened. The epiphyses of the long bones are sometimes loosened and spongy, while the medulla of the shaft shows increased vascularity. Congestion of the kidneys exists, together with evidence of widespread degeneration and deposits of chalky material.

NITRIC ACID

SYNONYM: Aqua fortis.

INFORMATION: Nitric acid is the strongest and most corrosive of the mineral acids and when acute poisoning occurs it is usually due to the concentrated form being taken or the fumes from it inhaled. When freshly prepared it is colorless, but on standing becomes a yellow or orange color and if uncorked, fumes are given off. This acid causes death when the concentrated form is taken and when its fumes are inhaled. The smallest quantity which is said to have produced death is two drams of the strongest acid.

SIGNS AND SYMPTOMS depend on the manner in which

this drug is taken,—when swallowed or inhaled. In the former a violent gastro-enteritis is at once set up, with burning pain in the mouth, throat and stomach, nausea and vomiting of strong acid matter which is orange or brownish-black in color. Shreds of mucous membrane and disintegrated blood are ejected. Symptoms of collapse such as cold clammy skin, rapid and weak pulse and feeble respirations are constant. If this acid is swallowed the fumes are sometimes inhaled, when edema of the glottis results and death quickly follows. Nitric acid causes a white stain on the skin and mucous membrane and this soon changes to yellow or orange, gradually becoming a reddish-brown and is very persistent. It leaves a yellow mark on clothing which dries and gradually disintegrates the cloth. The fumes of this acid are sometimes inhaled when large quantities are spilled. In such cases there is cough, dyspnea, pain in the throat and chest, often nausea and vomiting and prostration. Symptoms of pneumonia, together with prostration are slow in appearing, usually not showing until several hours after the fumes have been inhaled. A case of the author's experience occurring some years ago produced immediate discomfort and was followed by a period of several days in which the individual while conscious, was dazed and unable to perform any work. This in turn was followed by a period of calm in which labor was resumed and then disability again ensued and resulted in death twenty-nine days after the fumes were inhaled. Another individual in company with the one above described, also inhaled the fumes and after several hours disappeared and wandered around the country almost a week before being found. He, however, recovered after some weeks of disability.

DIFFERENTIAL DIAGNOSIS between sulphuric, nitric or hydrochloric acid poisoning is unimportant, as all three are corrosive; the only difference between them being that sulphuric acid is the most destructive, nitric acid next and hydrochloric acid the least; all three produce violent gastro-enteritis. Nitric acid may be distinguished by the color of the stain, which is yellow on clothing, and on the skin and mucous membrane it is first white, then yellow or orange and finally a brownish-red.

HOUSE CONFINEMENT in fatal cases when concentrated nitric acid has been swallowed seldom lasts over 1 or 2 days. If recovery takes place house confinement of from 1 to 2 or 3 weeks may be necessary before the individual is able to go into the open air. Poisoning by the inhalation of the fumes of nitric acid may produce house confinement of from 3 to 7 days

and this period be followed by a remission in which house confinement does not exist. This is succeeded by another period of house confinement lasting from 1 to 2 or 3 weeks.

TOTAL DISABILITY of 1 to 2 days is ample for fatal cases of nitric acid poisoning when the drug is swallowed. If recovery follows the ingestion of a quantity of this acid total disability is very uncertain, sometimes lasting only from 2 to 3 or 4 weeks and again the same number of months may be necessary before the occupation can be partially resumed.

PARTIAL DISABILITY is often demanded for long periods, when this acid has been accidentally swallowed or inhaled and death does not ensue at once; this is due to impairment of the digestive function and the cicatrices of the mucous membrane which follow wherever this acid touches.

EFFECTS: Individuals having suffered from nitric acid poisoning, either by swallowing or inhaling the fumes, are uninsurable for any kind of insurance until at least three to five years have elapsed after recovery is said to have taken place and no untoward signs or symptoms result.

POSTMORTEM APPEARANCES: The digestive tract from the mouth to the rectum shows evidence of a violent inflammation with a yellowish discoloration of the mucous membrane which is softened and in many cases eroded and sometimes perforated. The stomach is distended with gas and contains disintegrated blood which is strongly acid in reaction. The lungs often show evidence of an inflammation and this is especially pronounced when fumes of the drug have been inspired. The kidneys are congested and swollen and when death does not take place at once degeneration of the tissues occurs. In the author's case above mentioned, a postmortem examination showed the mucous membrane of the stomach to be corroded, of a dull red color and with numerous perforations, mostly on the posterior surface; the intestines were also corroded and perforated in spots. Both lungs were inflamed and showed minute perforations, the pleural cavity of each lung containing fluid and blood. The heart showed marked changes of degeneration, being soft, flabby and easily torn and all four cavities contained a number of perforations; the larger number, however, being in the left ventricle. The heart muscle was so friable that it could be easily separated and pulled apart and the pericardium contained quantities of disintegrated blood. The kidneys, liver and spleen were swollen and congested.

PHOSPHORUS

INFORMATION: Accidental poisoning by phosphorus does not often occur in the acute form, although chronic poisoning from this drug by those engaged in the manufacture of matches frequently takes place. Phosphorus or that contained in match heads is sometimes employed with suicidal intent and this is especially true in continental countries. A fatal termination from poisoning by this drug occasionally occurs within a short time, but usually some days elapse before death takes place. A very small quantity of phosphorus will produce death; one grain, however, being the average amount.

SIGNS AND SYMPTOMS after a poisonous dose of phosphorus has been swallowed usually appear within three to eight hours. This drug is a strong irritant, consequently a violent gastro-enteritis results and shows itself by a burning pain in the mouth, throat and stomach, accompanied by belching of gas which has the odor of garlic and a disagreeable taste of garlic is constantly present. There is thirst, nausea, and vomiting which comes on early, the vomited matter consisting of first the contents of the stomach and later mucus, bile and sometimes blood; in all cases in the early stages it is luminous in the dark. Persistent hiccoughing frequently exists and is characteristic. Constipation is the rule in acute cases of phosphorus poisoning, but when a movement does occur—especially from twelve to twenty-four hours after the drug has been swallowed—the stools are luminous in a darkened room. The urine is scanty and albuminous and bile-stained and may be entirely suppressed. The skin is cold and clammy, the pupils are dilated, the temperature is excessively high in the beginning and later becomes subnormal and the pulse is frequent, weak and irregular. If death does not occur until one to two days after the drug has been taken, jaundice is a prominent sign. When a fatal termination does not ensue within a short time, a period of remission lasting from two to three days follows and during this time a favorable prognosis is frequently given. At the end of this period the signs and symptoms suddenly reappear, usually beginning with jaundice which affects the whole body and bleeding from the nose and mucous membrane and hemorrhages under the skin. The urine becomes highly albuminous and contains fat globules and bile pigments. The liver is greatly enlarged, the abdomen is tympa-

nitic and twitching of the muscles, with convulsions and coma precede the death.

Chronic poisoning by phosphorus due to the inhalation of fumes of this drug in the manufacture of matches, comes on insidiously and is characterized by bronchitis, pains in the joints, emaciation and destruction of the teeth and bones of the jaw. When this form of poisoning affects an individual, necrosis of the bones of the upper or lower jaw quickly follows if a carious tooth has permitted the entrance of the drug.

DIFFERENTIAL DIAGNOSIS: When acute poisoning from prosphorus occurs the odor of garlic is pronounced and the taste of the same is constantly complained of by the individual. Jaundice, hemorrhages from the mucous membrane and also in the fundus of the eye, together with purpuric spots under the skin are usually sufficient to make the diagnosis. In addition, all early ejected matter either from the mouth or bowels is luminous in the dark and the blood and urine contain fat globules.

Copper Poisoning should not be confounded with phosphorus poisoning, but sometimes on account of the jaundice which appears in poisoning by copper, the diagnosis may not be made immediately.

Acute Yellow Atrophy of the Liver might be mistaken for poisoning by phosphorus, but in the former there is usually a period of prodromes. Violent pain in the esophagus and stomach is not complained of in this disease, but is prominent in phosphorus poisoning. The odor of garlic is not present and neither is ejected matter luminous in the dark. Percussion over the liver shows the area of hepatic dullness to be markedly decreased, while in phosphorus poisoning the liver is greatly enlarged, especially if death has not occurred at once.

HOUSE CONFINEMENT in all cases of acute poisoning by phosphorus which terminate fatally, usually require less than 1 day. When death does not occur so quickly house confinement of from 2 to 4 or 6 days sometimes follows. If recovery ensues house confinement of from 1 to 2 or 3 weeks is often necessary. Chronic cases of phosphorus poisoning do not require any house confinement, as treatment in the open air is more beneficial.

TOTAL DISABILITY in acute cases of poisoning seldom lasts over 1 week. If apparent recovery ensues, total disability of from 1 to 2 or 3 weeks may be present and this in turn is followed by a remission and later another period of disability lasting from 2 to 4 or 6 weeks. This is due to fatty degeneration of the

different organs of the body and death frequently occurs during this period. When chronic poisoning by phosphorus takes place, total disability is long and uncertain, lasting weeks and months; this time depending on the degree to which the drug has been absorbed, the amount of necrosis, the number of operations, if any, which are performed for the removal of the dead bone, the physical and financial condition of the individual and the method of treatment.

PARTIAL DISABILITY is seldom allowable, for the reason that accidental cases of poisoning by phosphorus are extremely rare. When such a case, however, does arise, this form of disability may be prolonged, lasting from 1 to 2 or 4 months and sometimes requiring the limit of the policy if liability exists.

EFFECTS: Individuals with a history of having suffered from acute phosphorus poisoning are not insurable for any kind of a policy until two to three years have elapsed and complete recovery is said to have occurred, and during which time no signs or symptoms referable to a degeneration of any of the organs of the body appear. Cases of chronic poisoning with necrosis of the bones of the jaw are not considered insurable for any kind of insurance after poisoning in this form has been suffered.

POSTMORTEM APPEARANCES when death has been due to phosphorus are characteristic, unless it occurred almost immediately. Jaundice of the skin, the conjunctiva and all the organs of the body is seen together with hemorrhagic spots under the skin and mucous membrane. In addition, this drug produces fatty degeneration of the heart, liver and kidneys and when phosphorus has been swallowed in the solid form, it is often found adhering to the mucous membrane of the stomach or intestines or causing a perforation. Evidence of hemorrhages into the pericardium or pleura and bladder are frequently found and the blood is fluid, with a disintegration and destruction of the red corpuscles. The contents of the intestines and sometimes the stomach are often found to be luminous in the dark and emit the odor of garlic. Evidence of inflammation and degeneration of the spinal cord is found in the majority of cases.

SULPHURIC ACID

SYNONYMS: Oil of vitriol; vitriol.

INFORMATION: Sulphuric acid is one of the strongest mineral acids, the most astringent and in the concentrated form

is a heavy liquid, oily in appearance, colorless and odorless when pure, but as usually seen in commerce it is of a brownish color. This acid is frequently used in the arts and in the manufacture of various articles and therefore poisoning either accidental or suicidal in intent often occurs. Sulphuric acid has a special affinity for water, rapidly dehydrating and carbonizing any tissues with which it comes in contact. The dilute acid is employed in medicine and a sufficient quantity will also produce death, although the symptoms are not so well marked as when a concentrated solution is taken. The smallest fatal dose on record for an adult is one dram of the concentrated acid, but apparent recovery after appropriate treatment has taken place when a much larger amount has been swallowed. This acid during its manufacture or when transported in lead vessels may be contaminated with lead or arsenic and the possibility of these drugs as impurities should be remembered in medico-legal work.

SIGNS AND SYMPTOMS come on immediately after the acid has been swallowed, showing a violent gastro-intestinal inflammation. There is severe burning pain in the mouth, esophagus and stomach, with nausea and vomiting of highly acid matter, which is dark brown in appearance and contains shreds of mucous membrane from the parts over which the acid has passed. These shreds of membrane are usually white at first but later become brown. The blood which is mixed with the vomited matter is disintegrated and resembles coffee-grounds. The pulse is weak, rapid and irregular, the respirations shallow and feeble, the urine scanty, containing albumin and sometimes entirely suppressed. If some of the acid has been inspired, edema of the glottis occurs and may be sufficiently marked to cause death at once. The stains from this acid on the lips and mucous membrane are first white, but rapidly change to brown or black.

DIFFERENTIAL DIAGNOSIS between poisoning by sulphuric, nitric or hydrochloric acid is unimportant, as all three acids usually produce death when any quantity has been swallowed. Sulphuric acid, however, is probably the most corrosive of the three. The differential diagnosis between these acids is more fully considered under Nitric and Hydrochloric Acids.

HOUSE CONFINEMENT following non-fatal doses of sulphuric acid depends on the quantity of acid swallowed, its degree of concentration, the rapidity with which treatment was instituted and the treatment itself. If recovery follows cases in which dilute acid has been swallowed, house confinement lasts

from 1 to 2 weeks. When a small amount of a concentrated solution has been taken internally either accidentally or by intent and recovery follows, house confinement is usually prolonged, lasting from 3 to 6 weeks and frequently from 2 to 3 or 4 months; this time depending on the degree of destruction of the mucous membrane of the stomach and the consequent mal-nutrition which follows. Fatal doses of this acid usually produce death within twenty-four hours, although as above stated, it may not occur until months after the drug has been swallowed when it is due to the absence of assimilation.

TOTAL DISABILITY when death occurs from the ingestion of this acid is usually not sufficiently long for a claim for weekly indemnity. If death does not follow and recovery ensues, total disability may be greatly prolonged on account of the ulceration and cicatrices which form wherever the acid has touched the mucous membrane. These causes, together with weakness due to impairment of the digestive function of the stomach may cause total disability to last from 1 to 2 or 3 months or more and at the end of that time to be followed by death.

PARTIAL DISABILITY is seldom payable following poisoning by this acid, as when the individual is able to resume the occupation, all the duties can be performed.

EFFECTS: If recovery follows the accidental swallowing of dilute sulphuric acid, insurance of all kinds must be denied such a person until all danger from the formation of strictures has passed This would not be until at least two to three years after the ingestion of this acid If the concentrated solution is taken internally, such a person would never be considered insurable for any kind of a policy.

POSTMORTEM APPEARANCES show a violent gastro-enteritis, with stains on the skin and mucous membrane wherever the acid has touched it. These stains if seen early are white, later they become brown or black. The mucous membrane of the mouth, throat and stomach is destroyed and separated from its base, and if death has occurred early all the coats of the stomach are greatly softened so that removal of this organ intact is often impossible. Sometimes perforations are found. The contents are strongly acid and chemical tests show the presence of sulphuric acid. When death does not occur immediately, some of the acid passes into the intestines and sets up a similar inflammation. The kidneys show evidence of inflammation and when death does not ensue until some months after the acid is swal-

lowed, they are contracted. The heart is usually empty and flabby and engorgement of the venous system with thick acid blood is found. Should the acid come in contact with the clothing the spot is characteristic, usually moist with the texture destroyed. On white goods this acid produces a black stain and on dark goods the stain is first red and then changes to brown.

PART II

VEGETABLE POISONS

ACETIC ACID

INFORMATION: Poisoning from the swallowing of acetic acid is rare and when it occurs the acid is usually taken into the mouth by mistake. It is a corrosive poisoning and produces changes of the mucous membrane with which it comes in contact.

SIGNS AND SYMPTOMS: When acetic acid is taken into the mouth and swallowed there follows severe burning pain, with vomiting, shock and collapse if a sufficient quantity has been ingested. This acid causes a dirty brown discoloration of the mucous membrane to appear, and if death does not result the parts affected slough and suppuration ensues, leaving a raw, granulating surface.

DIFFERENTIAL DIAGNOSIS between poisoning by any of the corrosive acids is unimportant as they all produce practically the same signs and symptoms, only varying in the degree of severity. Acetic acid as purchased in drug stores is a diluted solution, consequently, the effects produced by it are not so marked as when the stronger acids are swallowed.

HOUSE CONFINEMENT is extremely short in cases due to poisoning by this acid when a fatal termination occurs; death usually following within twenty-four hours. If this does not take place, house confinement depends on the amount of acid swallowed and may last a variable time, from 1 to 2 weeks in cases where only a small quantity has been taken into the mouth and little—if any—swallowed, to from 3 to 6 or 8 weeks when a considerable quantity has been taken into the stomach but death does not occur.

TOTAL DISABILITY of from 1 to 2 or 3 weeks is demanded in cases where only a small quantity has been ingested. Larger amounts produce long periods of disability, sometimes lasting from 4 to 6 or 8 weeks or longer, this time being due to the emaciation which results from inability to take or digest foods.

PARTIAL DISABILITY of from 2 to 4 weeks is sometimes necessary when a reasonably large quantity is taken and death does not occur. The payment of partial disability—if the policy so provides—is deserved on account of the weakness which results.

EFFECTS: A burn of the mucous membrane from acetic acid is followed by an eschar and later contraction of the parts involved. If the contraction is not serious and does not affect the lumen of the esophagus and the acid was swallowed accidentally, insurance of all kinds would be safely granted such persons from three to six months after complete recovery. Should permanent deformity, such as narrowing of the pharynx or strictures of the esophagus result, the risk would be an impaired one and no form of policy could be safely issued.

POSTMORTEM APPEARANCES: In the few fatal cases which have reached the postmortem table when death was caused by the swallowing of this acid, the mucous membrane of the tongue and esophagus were found to be of a dirty brown color, while the mucous membrane of the stomach was discolored and scattered over its surface there were small black elevations; these being due to the coagulated blood in the mucous membrane and underlying tissue. No other changes are reported to have occurred.

ACONITE

SYNONYMS: Aconitum napellus; wolfsbane; monkshood; blue rocket.

INFORMATION: Aconite is probably the most deadly poison known, and as the vegetable from which it is derived is a garden plant throughout America, accidental poisoning from eating the roots of this plant is not uncommon. These roots resemble in appearance the roots of the horse-radish plant, but when grated the pungent odor of the latter is lacking. If eaten the taste is similar to that of horse radish. The strength of the root or the preparations made from it varies greatly and depends on

the season of the year, the soil from which it is grown and method of manufacture; therefore the amount required to produce death is uncertain, usually, however, from four to six grains of aconitine and from one to two ounces of the tincture are sufficient.

SIGNS AND SYMPTOMS: When a poisonous dose of this drug has been taken internally, it immediately produces tingling of the mucous membrane of the mouth, throat and stomach and this soon becomes a burning pain with numbness, which gradually extends over the body. Dizziness, with muscular relaxation rapidly appears and is followed by shallow respirations, feeble and rapid pulse and subnormal temperature. Vomiting rarely occurs on account of the action of this drug on the nerves of the stomach. Dilated pupils are common, while convulsions occasionally precede the death—which is due to collapse and respiratory failure.

DIFFERENTIAL DIAGNOSIS: When an unknown poison has been swallowed and tingling and numbness in the mouth and other parts of the body are complained of, together with absence of vomiting, it is probable that aconite has been taken in one of its various forms. The poison from this plant—which is also grown in India—is often used to produce death among the natives.

HOUSE CONFINEMENT in fatal cases of aconite poisoning seldom exists, as this drug generally causes a fatal termination in from two to three or four hours; large doses producing death within a few minutes. Should recovery follow an accidental or intentional dose, house confinement rarely lasts over 2 or 3 days.

TOTAL DISABILITY does not exist sufficiently long in fatal cases to terminate in a claim for weekly indemnity. Should death not ensue, total disability in accidental poisoning by aconite seldom lasts over 2 to 4 days.

PARTIAL DISABILITY is not deserved following poisoning by this drug.

EFFECTS: When aconite has been taken by mistake and the danger of a recurrence of the error is eliminated, such a person is insurable for all kinds of insurance from two to four weeks after complete recovery.

POSTMORTEM APPEARANCES are not characteristic when death occurs from this drug. Venous congestion, however, usually exists, as the death is due to respiratory failure and the heart generally stops in diastole.

BELLADONNA—STRAMONIUM—HYOSCYAMUS

SYNONYMS: Belladonna (deadly night-shade); stramonium (thorn-apple, Jimson or Jamestown weed); hyoscyamus (henbane).

INFORMATION: Poisoning by belladonna, stramonium or hyoscyamus or any of the alkaloids derived from these drugs, such as atropine, daturine and hyoscyamine are common throughout the United States, for the reason that these three plants frequently grow in gardens. Accidental poisoning commonly results from the eating of the berries or roots of these drugs. Death does not often follow from hyoscyamine or any of its preparations, unless an exceptionally large dose has been swallowed.

SIGNS AND SYMPTOMS after poisoning by any of the three drugs are practically the same. Thirst, with dryness of the mouth is always present. This is soon followed by dilation of the pupils resulting in indistinct or double vision, dizziness, headache, a talkative delirium and finally coma and death due to failure of the respiratory centers. A rash resembling scarlet fever is sometimes produced by atropine. The pulse is rapid and small in volume, the respirations are deep and fast and the temperature is slightly elevated in the beginning of a case of poisoning, but when a fatal termination is about to occur, a subnormal temperature precedes the death. All three drugs are eliminated by the kidneys; therefore, this secretion gives evidence of the poison. It is said that two grains of atropine is the smallest fatal dose of this alkaloid on record for an adult.

DIFFERENTIAL DIAGNOSIS: *Hydrophobia* may sometimes be mistaken for poisoning by one of the above drugs, but in the former, dilation of the pupils is absent and by securing a specimen of urine and dropping some of this into the eyes of an animal, the action of these drugs is immediately apparent in causing a dilated pupil.

HOUSE CONFINEMENT is extremely short when poisoning from belladonna, stramonium or hyoscyamus occurs. Should death take place as the result of poisoning by any of the above drugs, it usually does so within 3 to 6 hours. If a fatal termination does not follow, house confinement seldom lasts more than 1 to 2 days.

TOTAL DISABILITY is not often payable when a fatal termination results and if recovery ensues, this form of disability is rarely more than from 2 to 3 or 4 days.

PARTIAL DISABILITY is not deserved following poisoning by any of the above drugs.

EFFECTS: When a poisonous dose has been accidentally taken and death does not follow, insurance of all kinds can be granted from two to four months after complete recovery.

POSTMORTEM APPEARANCES are not characteristic after poisoning by belladonna, stramonium or hyoscyamus. The dilated pupils may or may not persist. If death results from eating the berries of the belladonna plant or henbane, a blue or purple color of the mucous membrane of the stomach is present. Congestion of the vessels of the brain and lungs, with occasionally red spots along the alimentary canal are found. The alkaloids of these drugs are eliminated by the liver and kidneys and evidence of the poison can always be found in these organs and also in the brain.

COCAINE

INFORMATION: Cocaine poisoning is of frequent occurrence among a certain class of individuals. It is often used by morphine fiends in an endeavor to correct that habit, but they in turn become addicted to the use of cocaine and either symptoms of chronic poisoning follow or an overdose is taken accidentally or by intent. Deaths due to accidental poisoning by cocaine sometimes occur when this drug is given by a physician and this is claimed to be due to the instability of the preparations of cocaine or eucaine. Overdoses of this drug produce marked stimulation of the circulatory and respiratory systems and when a sufficient quantity has been ingested and causes a fatal termination, death is due to respiratory failure, with exhaustion and convulsions.

SIGNS AND SYMPTOMS of acute poisoning by cocaine resemble those produced by atropine poisoning. The mucous membrane of the nose, mouth and throat is dry, impairment of vision exists, with sometimes loss of speech, faintness and difficulty in swallowing; nausea and vomiting are rare. The respirations are shallow and feeble, while the pulse which is at first rapid and strong soon becomes weak, irregular and intermittent. The pupils are widely dilated, the speech is incoherent and talkative delirium follows, with convulsions, exhaustion and death.

Chronic poisoning exists in cocaine fiends and is often associated with the habitual use of opium or some of its prepara-

tions. Such a person shows dilated pupils, sallow skin, marked emaciation and languor and complains of insomnia, loss of ambition, impaired digestion and weakness and often has hallucinations and shows enfeeblement of mind. Formication is a common symptom of chronic cocaine poisoning in the later stages.

DIFFERENTIAL DIAGNOSIS: *Atropine Poisoning* produces symptoms similar to those resulting from an overdose of cocaine, but the differential diagnosis can generally be made by the history of the case. This drug, however, does not cause death as rapidly as cocaine.

Hydrophobia can usually be differentiated from cocaine poisoning by the history of a bite having been sustained by the individual from a rabid animal some time previously and the absence of dilated pupils.

Chronic Opium Poisoning associated with the habitual use of cocaine is easily diagnosed; the signs and symptoms following the repeated use of either of these drugs being characteristic and quickly recognized; the most pronounced are contracted pupils in opium poisoning, dilated ones in cocaine, marked emaciation in both, with a sallow complexion and a haunted look in each. Opium produces chronic constipation which results in diarrhea as soon as the drug is stopped, while cocaine does not cause this condition. Convulsions with dementia follow the constant use of either of these drugs.

HOUSE CONFINEMENT in fatal cases of acute cocaine poisoning does not exist, as death almost invariably occurs within one-half hour after the drug has been taken in sufficient quantity to produce this termination. Chronic cases are not confined to the house until after the drug has been taken for some time or house confinement exists for the purpose of controlling the cocaine fiend. In the former it occurs at intervals of a few days, after which the individual is able to go out and around. In the latter house confinement is variable, depending on the physical condition of the person when treatment is commenced, the method of treatment, the surroundings, etc. Usually, however, from 2 to 3 weeks confinement in the house are sufficient,—when modern methods demand outdoor exercise.

TOTAL DISABILITY does not exist in acute cases of cocaine poisoning when death occurs. Should such a termination follow after this drug has been accidentally swallowed or given by a physician, an insurance company, if liable for any indemnity, would be held responsible for the specified amount in the policy.

When death does not follow, total disability of from 1 to 2 or 3 days is usually ample. Cases of chronic cocaine poisoning should not be entitled to this form of disability under an accident or disability policy. If an accident policy alone was in force, total disability would not be allowed, while if a health or disability policy existed, total disability of from 2 to 4 or 6 weeks might be necessary in order to secure a release and cancellation of the policy.

PARTIAL DISABILITY is never deserved following the accidental poisoning by this drug, while partial indemnity for total disability under a disability policy might be necessary for chronic poisoning. If the policy provided this form of indemnity, such cases would hardly be entitled to more than from 2 to 4 weeks under any circumstances.

EFFECTS: Acute cases of cocaine poisoning which are not terminated by death leave no untoward effects and the individual is insurable from two to four weeks after recovery ensues under any form of policy. Habitual users of cocaine are uninsurable for any kind of a policy and if such a history exists in a person applying for insurance, an accident, health or life policy would hardly be issued by any company, unless five to ten years had elapsed after complete cure and no return to the use of the drug had occurred.

POSTMORTEM APPEARANCES in acute cases of cocaine poisoning are not characteristic, as death occurs so quickly that no pathological changes take place, except perhaps congestion of the brain, liver and kidneys. When death follows the constant use of this drug, the body presents a sallow appearance, is markedly emaciated and reveals evidence at numerous points where a hypodermic injection has been given.

COLCHICUM

SYNONYMS: Meadow Saffron; Colchicum Autumnale.

INFORMATION: Colchicum is a plant which grows throughout the United States in damp meadows. Its poisonous properties are due to an alkaloid—colchicine—which it contains. Poisoning by this drug is extremely painful and large doses invariably produce a comparatively slow death. From two to four drams of the wine of colchicum is almost sure to produce a fatal termination, while from one-half to one grain of the alkaloid is sufficient for the same purpose.

SIGNS AND SYMPTOMS are a burning sensation in the

mouth, throat and stomach followed by nausea and vomiting, with much pain in the abdomen and later purging with tenesmus. The stools do not often contain blood, but prostration with muscular weakness which becomes so pronounced as to result in paralysis supervenes. The pulse is rapid and feeble and as death approaches collapse due to exhaustion terminates the case.

HOUSE CONFINEMENT in fatal cases of poisoning by this drug seldom lasts over 1 day; death generally occurring within twenty-four hours. If a fatal termination does not ensue, house confinement of from 1 to 3 days is usually sufficient for recovery.

TOTAL DISABILITY does not exist when a fatal termination takes place. If recovery ensues from 2 to 4 days are generally ample for this form of disability.

PARTIAL DISABILITY does not follow from poisoning by colchicum or its alkaloid.

EFFECTS: If recovery takes place, an individual with a history of having suffered from accidental poisoning by this drug would be insurable for all forms of insurance from three to six weeks after complete recovery.

POSTMORTEM APPEARANCES: An intense inflammation of the mucous membrane of the stomach and intestines exists with swelling and sometimes small hemorrhages. The blood is usually dark and is slow in coagulating and not uncommonly free blood is found in the alimentary canal. In some cases congestion of the brain, spinal cord and lungs occur.

IVY POISONING

SYNONYMS: Poison ivy; poison oak; poison sumac; poison dogwood; rhus poisoning; dermatitis venenata.

INFORMATION: Rhus poisoning is the most common form of inflammation of the skin due to vegetable irritants and follows exposure to vegetables of poisonous origin. It occurs most frequently in the spring and fall and usually affects the face, hands and forearm, producing an inflammation of the skin of these parts, but any part of the body may be involved in the inflammatory process. The genital organs and the inside of the thighs often become affected and require confinement to bed. Some individuals are especially prone to poisoning by this vine and show the characteristic effects after slight exposure, while others can handle it with impunity. It is said that the poison exists as a non-volatile oil, but it is well known that persons suffer

from this poison without coming in direct contact with poison ivy. Disability from rhus poisoning is generally covered by an accident policy under the clause which provides a fractional part of the weekly indemnity when disability is "due to contact with poisonous substances." If a general disability policy is held by a claimant, the full amount of weekly indemnity is payable if the claim is covered under the policy.

Fig. 121.—Dermatitis venenata from exposure to poison ivy; showing numerous vesicles and blebs. (Stelwagon).

SIGNS AND SYMPTOMS appear within a few hours to several days after exposure to a plant which will cause the irritation. Burning and itching are first complained of and this is soon followed by swelling and redness of the parts involved, with a papular eruption ranging in size from a pinhead to an eighth or quarter of an inch in diameter which quickly becomes vesicu-

lar. This condition usually persists for one or two days, when the vesicles coalesce and rupture and a dried brownish-yellow scab takes the place of the vesicles,—healing following beneath this scab,—this latter generally requiring from three to seven days and sometimes longer.

DIFFERENTIAL DIAGNOSIS: *Eczema* resembles ivy poisoning, and is sometimes mistaken for this affection when it appears for the first time, but individuals who are susceptible to rhus poisoning usually make the diagnosis themselves by remembering exposure to some form of this poison. When eczema has been previously suffered, there is a history of a chronic condition and absence of exposure to poison and the marked inflammatory course as produced by poison ivy is apparent. Eczema

Fig. 122.—Dermatitis venenata from exposure to poison-ivy, following shortly after exposure; vesicular and bullous lesions: not an uncommon type; hands and forearms involved. Ivy-poisoning several days after exposure. (Stelwagon).

develops slower and requires a longer time for recovery and is not transferable from one part of the body to another by scratching as is poison ivy.

HOUSE CONFINEMENT from poisoning by this vine depends on the parts of the body affected. When the hands only are involved, house confinement does not often exist, but if the face and neck or the genital organs are affected, together with the adjacent parts, house confinement varies according to the severity of the affection and the area of skin involved and may require from 1 to 2 or 3 weeks according to the above conditions.

TOTAL DISABILITY in preferred risks when the hands alone suffer from the poisoning in mild cases, does not often last more than from 5 to 7 days. If the hands or fingers are com-

pletely involved in the poisonous process and the occupation requires special use of them, total disability generally lasts from 1 to 2 or 3 weeks. Preferred risks whose duties are office and supervising, are not totally disabled even though the hands are affected and tied up in bandages. Ordinary risks are totally disabled from 1 to 2 weeks when this poison affects the hands only. If the face, neck or genital organs are involved, this form of disability in all classes of risks lasts from 2 to 3 or 4 weeks,—the duration of disability depending on the severity of the poisoning, the location, the area and extent of the inflammation and the exact duties of the occupation of the individual.

PARTIAL DISABILITY of 1 to 2 weeks if allowed by the policy is sometimes payable to preferred risks when the hands have been involved. Ordinary risks are not entitled to this form of disability.

PARTIAL INDEMNITY FOR TOTAL DISABILITY if payable by the policy after the termination of house confinement is usually not demanded by any class of risks. Sometimes, however, from 3 to 7 days of the form of indemnity are necessary.

EFFECTS: All kinds of insurance can be issued one to two months after complete recovery to individuals who have suffered from this affection, but as they are very prone to have a recurrence and the slightest exposure causes a typical infection to follow, such persons would not be considered insurable for an accident or health policy unless it contained a waiver eliminating indemnity for this affection.

MUSHROOM POISONING

INFORMATION: Poisoning from eating mushrooms not uncommonly occurs and is due to eating one of two varieties of the poisonous form—the amanita muscaria or amanita phalloides. Mushroom poisoning generally occurs in the spring or fall when uninformed persons collect these fungi from the woods and fields.

SIGNS AND SYMPTOMS after eating the poisonous form do not usually appear until some hours later, when the poison manifests itself with sudden and great prostration, accompanied by headache, cold perspiration, muscular relaxation, sometimes nausea and vomiting and other times stupor or wild delirium. Slight elevation of temperature generally occurs and is accompanied by a rapid, feeble pulse and increased respirations. A

scanty amount of urine is excreted and this contains albumin and oftentimes this secretion is entirely suppressed. Poisoning from muscaria can generally be differentiated from that of phalloides by the fact that in the former the lachrymal glands are stimulated and an increased flow of tears result, together with profuse perspiration, while in the latter abdominal pain is more marked and is accompanied by diarrhea.

DIFFERENTIAL DIAGNOSIS: *Cholera* might be mistaken for mushroom poisoning if an epidemic of this disease was prevalent. The former, however, almost invariably occurs during an epidemic, the signs and symptoms are more marked and severe, the period of incubation is three to five days, while mushroom poisoning appears within a few hours after the ingestion of the poisonous variety and the rice-water stools from mushroom poisoning, while closely resembling those of cholera, are not typical cholera stools in appearance. The temperature in cholera is subnormal, while in mushroom poisoning it is elevated.

HOUSE CONFINEMENT following poisoning by either of the poisonous varieties in which death takes place, requires from a few hours to 2 to 4 days. If recovery ensues, house confinement of from 3 to 7 days is generally necessary.

TOTAL DISABILITY of from 3 to 7 days is usually payable for mushroom poisoning when the individual is carrying a general disability policy. An accident policy does not cover disability for mushroom poisoning, for the reason that the fungi are eaten intentionally and not accidentally and although an illness may result it is not accidental in origin. Should death take place and disability not have lasted seven days there would be no indemnity payable under many general disability policies and no death or weekly indemnity should the individual be carrying an accident policy.

PARTIAL INDEMNITY FOR TOTAL DISABILITY if allowed by the policy after the termination of house confinement is never deserved following a case of mushroom poisoning, for the reason that when recovery ensues the occupation can be resumed shortly after the termination of house confinement.

EFFECTS: No untoward effects are noticeable after the ingestion of poisonous mushrooms, and such a person is insurable for all forms of insurance from two to four weeks after complete recovery.

POSTMORTEM APPEARANCES: These fungi are intestinal irritants; therefore, evidence of an inflammation and con-

gestion of the mucous membrane of the stomach and intestines is apparent. In addition they produce effects closely resembling those of phosphorus poisoning, the red blood corpuscles are broken up or destroyed and this permits an extravasation of blood into the tissues which results in staining. Jaundice of the skin and conjunctiva is present and if death does not occur early, fatty degeneration of the liver and kidneys is found. Postmortem rigidity is slow in appearing after mushroom poisoning.

NUX VOMICA—STRYCHNINE

INFORMATION: Strychnine in overdoses exerts its chief effects on the spinal cord and accidental poisoning from this drug not uncommonly occurs; it is also used by suicides. When nux vomica or strychnine is given in a medicinal dose and often repeated, an accumulative action is sometimes seen on account of this drug not being eliminated by the system as fast as it is taken into it. Strychnine is sometimes used as a poisonous ingredient in the preparations of a powder or paste for the destruction of small animals, insects, etc., and in such a form produces accidental poisoning. Three to five grains of alcoholic extract of nux vomica and one-half to one grain of the sulphate of strychnine are sufficient to produce death.

SIGNS AND SYMPTOMS following a poisonous dose of this drug either come on immediately with instant contraction of all the muscles of the body after an excessively large toxic dose has been swallowed or they gradually appear in ten to thirty minutes after the drug has been taken into the system. When the poison has been swallowed and the symptoms do not follow at once, a bitter taste is complained of in the mouth, with a feeling of impending suffocation and difficulty of breathing. There is restlessness, with twitching of the muscles of the arms and legs and stiffness of the muscles of the neck. As the poison takes effect the characteristic tetanic convulsions begin in the muscles of the extremities and extend and involve all the muscles of the body. On account of these contractions breathing is interfered with and evidence of impaired inspiratory efforts is seen in the congestion of the face, staring eyes and the intense agonized expression known as "risus sardonicus." The convulsions last from one-half to three or five minutes and are followed by a period of relaxation; during this time the breathing is normal and apparently nothing is wrong with the individual. The pupils are

usually dilated during the convulsions and contracted in the interval. The duration of the intervals may be from one to two minutes to one-half hour or more, according to the amount of poison taken into the system and its effects. The convulsions are easily excited by a breath of air, slight movement of the bed or attempts at swallowing. Great thirst exists and spasms are produced by the slightest attempts to quench it. The blood is not sufficiently aerated on account of the convulsions, but the mind is clear until a fatal termination ensues and this is usually due to exhaustion following repeated convulsions or from asphyxiation. Death from poisoning by nux vomica or strychnine generally occurs within one-half to two hours.

DIFFERENTIAL DIAGNOSIS: *Tetanus* may sometimes be mistaken for strychnine poisoning, but in the former there is obtainable a history of a wound which was inflicted some time previously. In tetanus the symptoms are gradual in onset and do not become severe until several hours or more after the commencement, while in fatal cases of strychnine poisoning death has taken place before the symptoms of tetanus would have been well developed. Tetanus produces clonic spasms of the muscles and those of the face and neck are usually early affected, while in strychnine poisoning the spasms are tetanic in character and the muscles of the neck and face are generally the last ones to be involved. In tetanus the mind is cloudy or consciousness is completely lost, while in strychnine poisoning the mind is always clear until death occurs.

HOUSE CONFINEMENT in fatal cases of poisoning from nux vomica or strychnine does not last sufficiently long for a claim for weekly indemnity, as death almost invariably takes place under twelve hours. When recovery follows a large dose of this drug, house confinement of from 2 to 4 or 6 days may sometimes be required, on account of the energetic treatment that would be necessary to institute in a case of this poisoning and the exhaustion which would follow.

TOTAL DISABILITY is not payable for fatal cases of strychnine poisoning. If recovery follows the ingestion of a large dose of nux vomica or strychnine, total disability of from 3 to 7 days usually results.

PARTIAL DISABILITY or PARTIAL INDEMNITY FOR TOTAL DISABILITY is not payable following poisoning by this drug.

EFFECTS: Individuals having suffered from accidental

poisoning by nux vomica or strychnine which is followed by recovery, are insurable for all forms of insurance three to six weeks later, provided the liability of a recurrence of accidental poisoning is eliminated.

POSTMORTEM APPEARANCES: When death follows strychnine poisoning, the body may become rigid at once or death may occur during the relaxation of the muscles and be followed in five to ten minutes by postmortem rigidity which is very pronounced. The hands are generally closed and tightly clenched, while the foot is curved downward, causing a well marked arch to be formed on the plantar surface; sometimes opisthotonos is present. On opening the body, the blood is found to be dark and liquid and the external surface of the stomach is often highly congested. The heart is generally contracted, but occasionally the right side is distended and filled with black, fluid blood. If any urine is in the bladder it shows albumin and also contains strychnine. When the brain and spinal cord are opened they are found congested and an over secretion of serous fluid is present.

OPIUM AND MORPHINE

INFORMATION: Opium is a dried juice or milky exudate which appears on the surface of the unripe capsules of white poppy or Papaver Somniferum. This plant is a native of Asia, but is now grown in other parts of the world. The drug derives its medicinal properties from its alkaloid—morphine—although a number of other alkaloids are found in crude opium. Morphine is most frequently employed in medicine and is also used to produce poisonous effects whether taken intentionally or by mistake. The strength of opium varies; consequently, the different tinctures made from this drug are not always of the same strength. Old tinctures in which the alcohol has evaporated, are much stronger than recent ones or preparations of the drug which are sold in some drug stores without prescriptions. Opium and morphine produce practically the same signs and symptoms; opium, however, acting less quickly than does morphine. The latter is a stronger hypnotic than the former, but more frequently produces pruritus and cutaneous eruptions. It also causes less derangement to the stomach, it is not as constipating as opium and does not as commonly produce retention of urine as the original drug. The fatal dose of opium and morphine varies according to the age and physical condition of the individual and whether the

drug has been habitually used or not. Two drams are said to be the smallest quantity of tincture of opium that has produced a fatal termination. The average fatal dose of the tincture, however, being one-half ounce. Four grains of crude opium—equal to two and one-half grains of the extract—have produced death when taken at one time. One grain of morphine is the average fatal dose to an adult who is unaccustomed to its use.

SIGNS AND SYMPTOMS from poisoning by opium may not appear until one-half to one hour after the drug has been swallowed, while morphine if given in an overdose hypodermically, may produce symptoms of poisoning within a few minutes. Opium or morphine when swallowed in toxic doses produces a short stage of cerebral excitement and this is followed by drowsiness, which soon becomes an intense desire for sleep. Before deep sleep ensues there is dizziness, headache and muscular relaxation. In the beginning, the individual can be aroused by shouting in the ear, shaking and other means, but as the drug becomes more effective, total insensibility ensues, the breathing becomes loud and jerky, the pulse—which at first was full and strong—becomes weak and irregular, both pupils are strongly contracted, usually to pin points and refuse to react to light. Just before death occurs, one or both pupils dilate. All the secretions of the body are diminished, with the exception of perspiration which usually appears on a cold skin, causing a clammy feeling. In fatal cases edema of the lungs is present, together with muscular twitchings and sometimes bloody diarrhea. When death follows it is due to respiratory failure, although sometimes paralysis of the heart is the cause.

Chronic poisoning due to the habitual use of opium or morphine produces symptoms which are easily referable to this drug. There is a general cachectic appearance, with sinking in of the tissues around the eyes, a dark line beneath them, sallow complexion, loss of ambition and strength, impaired digestion, constipation, insomnia, anorexia, together with mental depression and oftentimes impairment. The pupils are contracted while the individual is under the effects of the drug and dilate as soon as the effects wear off. The majority of morphine fiends take this drug hypodermically; therefore, the arms and legs show the scars of multiple punctures. Habitual users of opium or morphine seem unable to tell the truth at any time, even though it serves better than a falsehood.

DIFFERENTIAL DIAGNOSIS: *Coma* may be due to a

number of causes, its diagnosis is highly important and is considered under Concussion of the Brain.

HOUSE CONFINEMENT following poisoning by opium or morphine in which recovery takes place rarely lasts more than from 2 to 4 days.

TOTAL DISABILITY following acute opium or morphine poisoning seldom lasts more than from 3 to 5 days. Habitual users of this drug are totally disabled 1 to 2 days only and these periods of disability occur at irregular intervals. Such persons, however, would not be covered by an insurance policy for indemnity. When death follows the taking of large doses of this drug, it usually occurs within twelve hours and in such cases no weekly indemnity would be payable.

PARTIAL DISABILITY or PARTIAL INDEMNITY FOR TOTAL DISABILITY is not payable in any case following the taking of this drug.

EFFECTS: Individuals having suffered from acute opium poisoning which was accidental in origin are insurable for all kinds of insurance from three to six weeks after complete recovery, provided the opportunity for the accidental taking of the drug is eliminated. Opium or morphine fiends are uninsurable for any kind of insurance at any time.

POSTMORTEM APPEARANCES are not characteristic and this is especially true if death occurs early. If the tincture of opium has been swallowed an odor is sometimes perceptible on opening the stomach, but when morphine has been taken no odor is apparent. If death has not ensued until six to eight hours after the ingestion of this drug, the vessels of the brain are usually engorged and there is an effusion of serum into the ventricles and at the base of the brain. The lungs generally show edema and are filled with blood, while the right side of the heart is distended with dark fluid or clotted blood. The bladder is not uncommonly found to contain a considerable quantity of urine and this secretion shows the presence of the poison. When death has occurred from an overdose in a morphine fiend, the body is found to be emaciated and evidence of multiple punctures of the skin of the forearms and legs by the hypodermic needle is apparent.

OXALIC ACID

SYNONYM: Acid of sugar.

INFORMATION: Oxalic acid is frequently used in at-

tempts at suicide because it is cheap and easily purchased. It is also often taken accidentally, this acid resembling Epsom salts and when dissolved in water the resulting mixture is colorless and has an acid taste. When swallowed in the concentrated form death quickly follows and if taken diluted, its action is mainly on the nervous system and a fatal termination does not often occur. A dram and a half is the average fatal dose when concentrated.

Acid potassium oxalate (salt of sorrel, essential salt of lemons) when swallowed produces practically the same signs and symptoms as does oxalic acid; this being due to the latter acid which is contained in the former.

SIGNS AND SYMPTOMS: When a large concentrated dose is swallowed it immediately causes a burning pain in the mouth, throat and stomach to be followed at once by retching and

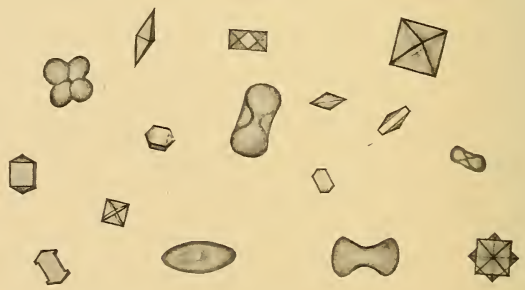


Fig. 123.—Various forms of calcium oxalate crystals. (Ogden).

vomiting; the vomited matter consisting of the contents of the stomach, with a strongly acid reaction and containing disintegrated blood. The color of the vomit is dark brown or black. Occasionally vomiting does not occur. Severe pain is complained of in the abdomen and this is increased by pressure. Collapse with its attendant signs and symptoms ensues and death rapidly follows; usually occurring within one-half hour. Smaller doses when taken diluted act on the nerve centers, producing cramps and numbness of the extremities, nervousness and sometimes delirium. In addition there is thirst, swelling of the tongue and occasionally salivation. The urine following the ingestion of this poison in the concentrated or diluted form shows an enormous quantity of oxalate crystals. It is greatly diminished in quantity and sometimes entirely suppressed.

DIFFERENTIAL DIAGNOSIS between poisoning by ox-

alic acid and potassium oxalate is difficult and unimportant; the signs and symptoms being practically the same in cases of poisoning by either drug. Oxalic acid causes a scalded appearance of the mucous membrane of the mouth and throat and later these surfaces are covered by dark brown mucus. Increased quantities of oxalic acid in the form of oxalate crystals are early found in the urine. A diagnostic point of poisoning by oxalic acid is sudden dullness and apathetic condition of the individual following signs of severe gastro-intestinal irritation and death within one-half to an hour.

HOUSE CONFINEMENT in fatal cases when a concentrated solution of this drug has been swallowed seldom exists, as death takes place almost immediately. When the acid is taken in a diluted form and death ensues, house confinement generally lasts from 1 to 3 or 4 days. If recovery follows this form of poisoning, convalescence is slow and protracted and confinement to the house lasts from 2 to 3 or 4 weeks; this time depending on a number of conditions; namely, the amount of acid taken, whether concentrated or diluted, the state of the stomach at the time the acid is swallowed, if empty or containing food, the physical condition of the individual and the rapidity with which treatment is instituted after the poison has been taken.

TOTAL DISABILITY in cases which are not fatal within one-half to an hour, but which finally terminate in such a manner, seldom require more than from 2 to 4 or 5 days. When recovery takes place total disability of from 2 to 4 or 6 weeks is often necessary after the ingestion of this acid.

PARTIAL DISABILITY when oxalic acid has been taken accidentally seldom lasts more than 1 to 2 weeks, for the reason that when the occupation is resumed, usually all the duties can be undertaken.

EFFECTS: Oxalic acid being a corrosive, vegetable acid, it causes destruction of tissue when swallowed and is followed by cicatrices. Individuals, therefore, who have swallowed this acid accidentally are uninsurable for all kinds of insurance until two to three years have elapsed and no evidence of stricture of the esophagus exists.

POSTMORTEM APPEARANCES vary according to the amount of acid swallowed. Concentrated doses result in whitening of the mucous membrane of the mouth, throat and stomach and this corroded part soon becomes covered with brownish mucus. The parts touched by the acid are soft or brittle and easily

removed and beneath the destroyed surfaces of mucous membrane is an area of inflammation. The contents of the stomach are acid, often being fluid and dark in color and containing much disintegrated blood. Perforation of the stomach sometimes occurs and removal of this organ is usually difficult on account of the action of the acid. When death has not ensued at once the small and large intestines show evidence of inflammation, and the kidneys also in such cases are inflamed, while the urine contains large quantities of calcium oxalate crystals. The blood is acid and usually dark and fluid, although it may be thickened.

PART III

MISCELLANEOUS POISONS

ACETANILID—ANTIPYRIN—PHENACETIN

INFORMATION: Drugs derived from the destructive distillation of coal tar are now very frequently used in medicine and the above are among the most prominent. They all possess common properties and the description of one suffices for all. The frequent use of headache powders and effervescent drugs for the relief of various pains and constipation, often result in poisoning and the signs and symptoms thus produced are due to some coal tar product which is contained in the headache or effervescent powder and generally this drug in headache powders is acetanilid —as it is the cheapest. Chronic poisoning by coal tar products in the shape of so-called headache powders is often undiagnosed, although the person suffers with ill health from no apparent reason. These drugs exert their most pronounced action on the blood, reducing its alkalinity and power of carrying oxygen to the tissues and finally ending in a disintegration of the red blood corpuscles. A fatal dose of any of these drugs is variable; as small as five to ten grains having produced death, while again one dram or more may be taken and a fatal termination not ensue.

SIGNS AND SYMPTOMS after a toxic dose of any of the coal tar derivatives usually show themselves within fifteen minutes to one hour after the ingestion of the drug. Chilliness is complained of and is followed by cyanosis of the face, with blue lips and anxious expression. A cold perspiration appears on the

forehead and gradually extends and involves the whole body. The pulse is slow, soft and compressible and finally becomes weak and irregular, the respirations are shallow and sometimes nausea and vomiting occur. General anesthesia with loss of reflex action and motor and sensory paralysis is seen when large poisonous doses are taken. When death takes place it is due to respiratory failure.

Chronic poisoning resulting from the habitual use of these drugs unauthorized by a physician results in a general deterioration of the health, with no prominent signs and symptoms that indicate any disease to be existing. There is great mental irritability, restlessness, impaired digestion and on account of the destruction of the red blood corpuscles, a sallow complexion results and the heart action is irritable and irregular. The urine is dark in color and often contains albumin.

DIFFERENTIAL DIAGNOSIS between poisoning by acetanilid, antipyrin or phenacatin is unimportant and practically impossible; the treatment is the same in all cases.

HOUSE CONFINEMENT in acute poisoning by coal tar derivatives, when recovery takes place, seldom lasts more than from 3 to 7 days. If a fatal termination occurs it usually does so within twenty-four hours and therefore no claim for weekly indemnity under an accident policy is payable if the drug was accidentally taken.

TOTAL DISABILITY when death ensues, does not last long enough to constitute a claim for weekly indemnity and if an individual carrying an accident policy voluntarily takes any of these drugs or headache powders and death results, an insurance company is not liable for an accidental death claim. If recovery follows the taking of a toxic dose of these drugs, total disability of 1 to 2 weeks results, but this time is not covered by an accident policy.

PARTIAL INDEMNITY FOR TOTAL DISABILITY if payable by the policy after the termination of house confinement may sometimes be demanded and if payable, 1 week is usually ample.

EFFECTS: When an individual has suffered from acute poisoning by one of the coal tar products or from a condition due to the habitual use of these drugs, insurance of all kinds must be denied such a person, until three to six months after complete recovery has ensued and is shown to exist by a medical examination.

POSTMORTEM APPEARANCES after acute poisoning by acetanilid, antipyrin or phenacetin show the blood to be dark in color and the lungs filled with fluid-unaerated blood. The heart is flabby and the kidneys are congested and filled with disintegrated red blood corpuscles. The urine is very dark and also contains broken down red blood corpuscles. Death from the habitual use of this drug shows the body emaciated and in addition to the above, fatty degeneration of all the organs is present. These drugs are eliminated by the kidneys and proper tests reveal the presence of the chemical product which is formed when these coal tar products are broken up in the body.

METHYL ALCOHOL

SYNONYMS: Wood alcohol; Wood, Columbian or Colonial spirit.

INFORMATION: Wood alcohol is now so extensively used that accidental poisoning from swallowing this liquid not uncommonly occurs, this form of alcohol being mistaken for ethyl alcohol. Poisoning may also result when methyl alcohol is used in the preparations of certain alcoholic extracts, which are sold at reduced prices. This form of alcohol is a dangerous poison and in toxic doses—which are not fatal—exerts its most pronounced effects on the optic nerves resulting in partial or complete blindness. The inhalation of methyl alcohol in a closed room is said to produce signs and symptoms of poisoning. The amount of a fatal dose of wood alcohol varies; five drams having caused total blindness in a reported case, while one to three ounces may be sufficient to cause death.

SIGNS AND SYMPTOMS after a fatal dose has been swallowed are headache, vertigo, muscular weakness, with nausea and vomiting. This soon ends in coma and death within eight to twenty-four hours and sometimes earlier. When a poisonous dose has been ingested and a fatal termination does not occur, inflammation of the optic nerve results. There is tenderness of the eyeball and movement causes pain, the pupils are dilated and do not react to light and the sense of color perception is diminished in the early stages. As the effect of the poison becomes more pronounced an optic neuritis follows, with exudation into the retina and gradually loss of vision. This may persist for several days or even weeks and be followed by blindness and this in turn by an improvement, in which some sight gradually re-

turns, but usually this disappears and total and irrecoverable loss of vision results. Atrophy of the optic nerve is present at this time. When a non-fatal dose is swallowed, nausea and vomiting, with headache, dizziness and muscular relaxation may not ensue until one to three days later, and at this time be accompanied with the above described changes in the eyes.

HOUSE CONFINEMENT following rapidly fatal cases of methyl alcohol poisoning does not usually last longer than twelve to twenty-four hours, when a fatal termination occurs. If recovery ensues house confinement is variable and uncertain; sometimes requiring only from 3 to 7 days and other times persisting for from 2 to 3 or 6 weeks. When house confinement is prolonged it is usually due to the changes which occur in the eyes and which necessitate confinement to a darkened room in an endeavor to preserve the sight.

TOTAL DISABILITY following accidental poisoning by methyl alcohol is not present when a fatal termination rapidly takes place. If death does not ensue after a poisonous dose has been swallowed, total disability may last from 1 or 2 to 3 or 6 weeks. Sometimes on account of complete loss of sight total disability is permanent.

PARTIAL INDEMNITY FOR TOTAL DISABILITY when house confinement is not required by the policy is uncertain and may last only from 1 to 2 or 3 weeks, while again the limit of the policy may be required before this form of disability is ended.

EFFECTS: In poisoning by wood alcohol which is followed by complete recovery and no impairment of vision, an insurance company would issue all forms of insurance from three to six weeks after complete recovery. If partial or complete loss of sight followed, it is questionable if any kind of a policy would be granted such a person.

POSTMORTEM APPEARANCES following an early death after the ingestion of wood alcohol show an acute congestion of the alimentary canal, the brain and spinal cord. The urine frequently contains albumin and if death has not occurred immediately, changes in the eye are shown by a microscopic examination. When death takes place some days or weeks after the ingestion of the poison, fatty degeneration of the organs of the body is seen, together with changes in the eyeball and atrophy of the optic nerves.

AMMONIA

SYNONYMS: Liquid ammonia is known as volatile alkali; hartshorn; ammonia; ammonia water.

INFORMATION: Ammonia is a colorless pungent gas and may produce death in this form by inhalation. In commerce this gas is dissolved in water and its strength varies according to the percentage of gas contained in the liquid. In this form it causes disability and death when swallowed and sometimes produces a fatal termination when a sufficient quantity of the gas is inhaled while a solution of it is being swallowed. Death from the inhalation of fumes of ammonia is usually accidental in origin and occurs to individuals employed where this gas is manufactured or used. Liquid ammonia being colorless, is sometimes swallowed by mistake and if enough is taken death results. When ammonia gas is inhaled death ensues at once, but if the gas dissolved in water is swallowed, the usual time required for a fatal termination is twelve to fifteen hours.

SIGNS AND SYMPTOMS after the inhalation of undiluted ammonia gas follow immediately. There is dyspnea, violent pain in the air passages of the head and in the lungs, with edema and spasm of the glottis causing almost instant death by suffocation. When the gas is more or less diluted with air and inhaled, the same symptoms supervene but are less marked, and in many cases after several hours pneumonia develops. The symptoms of poisoning by liquid ammonia which is swallowed, depend on the amount of gas dissolved in the water. Strong solutions produce a severe burning pain in the mouth, throat and stomach which soon extends and involves the abdomen and is increased by pressure. Loss of voice, with profuse salivation, difficulty in swallowing and swelling of the tongue occur. Nausea supervenes and is followed by vomiting of first the contents of the stomach—which appear soapy in character—and this is soon followed by the ejection of shreds of mucous membrane and blood stained mucus and violent bloody purging. The urine is diminished in quantity, becomes strongly alkaline and contains blood and albumin. When these symptoms are not sufficiently severe to cause death, pneumonia may develop within a few hours after the poison has been swallowed, and in such cases the typical signs and symptoms of this disease develop.

HOUSE CONFINEMENT does not exist when death follows the inhalation of ammonia gas. If this poison is swallowed

in the liquid form and death takes place, it usually does so within twenty-four hours. Should recovery ensue after a more or less concentrated solution of the gas in water is taken into the stomach, house confinement depends on the degree of concentration and the subsequent destruction of tissue. Usually, however, 1 to 2 weeks are sufficient.

TOTAL DISABILITY does not follow when death occurs after ammonia has been inhaled or swallowed in the concentrated form. When recovery ensues, the length of total disability is variable and depends on the degree and area of tissue destroyed and the resulting impairment of digestion. The majority of cases usually demand from 2 to 6 weeks.

PARTIAL DISABILITY of from 2 to 4 or 6 weeks is sometimes payable to individuals who have accidentally swallowed a strong solution of ammonia.

EFFECTS: When a concentrated solution of ammonia has been taken and is followed by recovery, such a person would be uninsurable for any kind of a policy until one to three years had elapsed after the drug was swallowed; this being due to the fact that destruction of the mucous membrane occurs and cicatrices which result may become so contracted that nutrition is badly impaired.

POSTMORTEM APPEARANCES when death follows the inhalation of fumes of ammonia are not characteristic. If the body is opened early enough, ammonia is detected by the odor. The blood is markedly alkaline in reaction and evidence of a violent inflammation involving the glottis and lungs is seen. If the drug is swallowed the odor may be detected in the stomach, which, with the mouth and throat shows an intense inflammation with destruction of the mucous membrane and softening of the parts involved. Usually extravasation of blood occurs into the stomach and frequently a false membrane exists in the esophagus. If any urine remains in the bladder it contains blood and albumin, is darker in color than normal and extremely alkaline in reaction.

CANTHARIDES

SYNONYM: Spanish flies.

INFORMATION: Cantharides is a well known and extremely powerful irritant drug, which is often given in overdoses by uninformed persons to produce an effect and this is especially true when the poisoning occurs in women. Cantharides is gen-

erally employed in the powder form by ignorant persons, although the tincture is sometimes used. From one-half to one dram of the powdered insects and from one to two ounces of the tincture are usually sufficient to produce a fatal termination. Smaller doses will cause death when the kidneys are diseased.

SIGNS AND SYMPTOMS after a toxic dose of Spanish fly has been taken show themselves in one to three hours by a feeling of faintness with dizziness, a burning, stinging sensation in the mouth, throat and stomach, with nausea and vomiting of glairy mucus which is sometimes blood stained. The pain—which is first complained of in the stomach—soon extends and involves the entire abdomen and is accompanied by pain in the loins, severe strangury, priapism and the passage of bloody urine. Purging generally takes place when this form of poison is swallowed. The stools are first mucus in character, then fibrinous and finally very numerous but scanty in amount and bloody. Salivation often follows with swelling of the salivary glands and not uncommonly blisters are found in the mouth. Respirations are increased in number and are shallow, while the pulse is rapid and strong in the early stages, but gradually becomes weaker. Severe thirst is always a prominent symptom of this poisoning and frequently a fatal termination is preceded by convulsions, delirium and coma. When poisoning from cantharides occurs in the male sex, violent erotic excitement follows, showing itself by heat and swelling in the penis, with priapism and frequent emissions of seminal fluid.

DIFFERENTIAL DIAGNOSIS: When poisoning by Spanish fly has occurred by the powdered insects being swallowed accidentally or taken in an overdose by intent, the vomited matter contains the shiny, golden-colored particles of the wings which are apparent to the naked eye in the majority of cases, and if not, the microscope will reveal the smaller particles. If the tincture has been taken the acute violent inflammation of the genital organs and the desire for sexual intercourse will usually serve to show the kind of poison producing the disability.

HOUSE CONFINEMENT following a poisonous dose of these insects if death does not ensue, usually lasts from 1 to 2 weeks. When death occurs, house confinement does not often require more than from 1 to 3 or 5 days and this time is not sufficiently long for a claim under a disability policy when the policy does not pay indemnity for less than one week. Sometimes, how-

ever, death does not occur early and house confinement may last from 2 to 3 weeks.

TOTAL DISABILITY following a fatal dose of Spanish fly does not often require more than from 2 to 5 days, although a fatal termination may be delayed and total disability of from 1 to 3 weeks exist before death occurs. If recovery takes place total disability is uncertain and depends on the physical condition of the individual and especially the condition of the kidneys, whether diseased or not, the quantity of poison swallowed and the rapidity with which treatment is instituted. Usually, however, from 1 to 2 or 3 weeks are ample. In cases with diseased kidneys, this form of disability may be greatly increased, lasting from 3 to 6 weeks and sometimes longer.

PARTIAL DISABILITY is sometimes payable when the poison has been accidentally swallowed by an individual whose kidneys are impaired and death does not result. Under such conditions from 2 to 4 or 6 weeks of this form of disability following a period of total may be necessary.

PARTIAL INDEMNITY FOR TOTAL DISABILITY is sometimes required when this drug has been voluntarily taken in an overdose and in such cases if house confinement is not necessary for this form of indemnity, from 2 to 4 or 6 weeks may be payable before complete recovery ensues.

EFFECTS: On account of Spanish fly exerting its most pronounced effects on the kidneys and sexual organs, an individual having suffered from a toxic dose which did not result fatally, would be uninsurable for life or health insurance until at least three to six months had elapsed without any signs or symptoms referable to the poisoning and a medical examination had shown the secretion of the kidneys to be normal. Accident insurance in such cases can generally be issued as soon as complete recovery ensues.

POSTMORTEM APPEARANCES: These insects when swallowed produce a gastro-intestinal irritation and therefore evidence of inflammation in the mouth, throat, stomach and intestines is apparent. When death takes place from this cause, blisters and sometimes ulcers of the stomach and intestines are present. The genital organs and kidneys are congested and inflamed, the ureters show evidence of the same condition, together with the bladder which is contracted. Sometimes ulcerations exist in the bladder and urethra.

CAUSTIC ALKALIES

SYNONYMS: Poisoning by fixed alkalies; poisoning by concentrated lye.

INFORMATION: Poisoning from the swallowing of caustic alkalies such as potassium, sodium or ammonium hydroxid not uncommonly occurs, but it is usually more frequent among children, when lye in a more or less concentrated form is swallowed by mistake. Potassium hydroxid exerts a more depressing action on the heart than does sodium hydroxid. All caustic alkalies are extremely corrosive in effect and destroy the tissues with which they come in contact, but in a different manner than do the corrosive acids. Caustic alkalies are very deliquescent and quickly unite with the fats and albuminoids of the tissues forming soluble soaps, with the subsequent destruction of the tissues. From two to four ounces of liquor potassæ or sodæ are sufficient to produce death in adults, while a much larger quantity of concentrated lye is necessary in the same class.

SIGNS AND SYMPTOMS come on immediately after these poisons have been swallowed and consist of an exceedingly severe burning pain in the mouth, throat and stomach with a soapy taste, cold skin and clammy perspiration. Pain in the stomach soon extends and involves the abdomen which becomes very tender to the touch. Nausea and vomiting occur early, the latter consisting of the contents of the stomach which appear frothy and are tinged with more or less blood. The respirations are shallow and rapid, the pulse feeble and irregular while the urine is dark, scanty and sometimes entirely suppressed. All the symptoms of profound collapse ensue when death takes place or a remission occurs and a fatal termination does not follow until later.

DIFFERENTIAL DIAGNOSIS between the corrosive acids and caustic alkalies is very important. When a corrosive acid has been taken its particular stain of the mouth or clothing is usually apparent, while with the caustic alkalies no stain exists. The vomited matter in acid poisoning is always extremely acid, but when a caustic alkali has been swallowed the opposite is true. Both forms of poisoning destroy the mucous membrane, but in acid poisoning the shreds of membrane which are cast off generally show the particular stain of the acid that causes the destruction, while the mucous membrane which is detached owing to a caustic alkali being swallowed, does not show this discolora-

tion. The vomit due to a caustic alkali is always soapy and frothy in character and this is not the case when a strong acid has been taken into the stomach.

HOUSE CONFINEMENT when a caustic alkali has been swallowed does not last more than 1 to 2 days if death ensues. Should recovery follow, confinement to the bed and house of from 1 to 2 or 3 weeks is often necessary; this time depending on the degree of concentration of the solution swallowed and the area of tissue destroyed.

TOTAL DISABILITY following the swallowing of caustic alkalies in which death occurs, does not usually last long enough to constitute a claim for weekly indemnity under a disability policy. When death does not take place, total disability is variable and depends on the strength of the solution, the area of tissue destroyed, the physical condition of the individual and the rapidity with which treatment is begun after the swallowing of the poison. If a concentrated solution is diluted either before or immediately after being swallowed, total disability is not long, sometimes only lasting from 1 to 2 or 3 weeks.

PARTIAL DISABILITY of from 1 to 3 weeks is sometimes payable to individuals who have swallowed a solution of caustic alkali by mistake.

EFFECTS: When a history exists of a concentrated solution of any caustic alkali having been swallowed and followed by recovery, such a person would be uninsurable for life or health insurance until one to three years after the date of accident; this being due to the probability of the formation of strictures and also the destruction of the peptic glands of the stomach. Accident insurance in such cases could be safely issued from three to six months after apparent complete recovery.

POSTMORTEM APPEARANCES: After a death due to the concentrated solution of lye, there is noticed a violent inflammation of the mucous membrane of the mouth, throat and stomach. Wherever the caustic has touched the mucous membrane it is usually destroyed and discarded and in its place is a raw surface. Caustic alkalies produce the most pronounced effect on the lower part of the esophagus, sometimes causing a perforation at this point. The mucous membrane of the stomach is not so badly disorganized following the ingestion of caustic alkalies as when some of the corrosive acids are swallowed. The contents of the stomach are alkaline in reaction and show dark red blood with disintegrated corpuscles. When the solution has

not been a concentrated one and death does not occur for several days, in addition to the inflammation of the mucous membrane of the parts over which the caustic has passed, there are often found ulcers of the throat, stomach and sometimes the upper part of the intestines, together with swelling and edema of the affected parts. In such cases the liver and kidneys are congested and the urine is alkaline in reaction and contains albumin.

CHLORAL

INFORMATION: Acute poisoning by chloral is most frequently caused by the taking of overdoses of medicine which contain chloral or the drug is used by thugs under the name of "knockout drops." Chronic poisoning occurs in habitual users who take it instead of using opium or cocaine. When chloral is administered in the form of knockout drops and death results, it is questionable if such a death is covered by an accident policy. Weekly or death indemnity is not payable when the drug is voluntarily taken and an overdose produces disability or death. Chloral differs in its strength and therefore the quantity that may produce a fatal termination is variable. Usually, however, from one to two drams will cause death.

SIGNS AND SYMPTOMS: When an overdose of this drug is taken voluntarily or by intent there is usually a short stage of excitement which may be accompanied by symptoms of gastric irritation. This is followed by drowsiness and deep sleep; during which period the face is livid and covered by a cold sweat, the pupils are contracted and on awakening they immediately dilate. Respirations are at first slow and deep and later they become shallow and feeble, the pulse is slow and then becomes rapid, weak and irregular. There is complete muscular relaxation with loss of reflexes and death generally follows from respiratory failure.

Chronic chloral poisoning exists in individuals who use this drug habitually and in such cases the physical and mental condition is impaired and many obscure signs and symptoms present themselves. There is nervous irritability with congestion of the eyes and frequently a dermatitis. Chronic indigestion is present with poor appetite and the stools are generally devoid of coloring matter, due to the inactivity of the liver. Mental impairment which shows itself in inability to follow the usual occupation sometimes ends in insanity.

DIFFERENTIAL DIAGNOSIS: *Opium Poisoning* resembles that produced by chloral with the exception, however, that the pupils are constantly contracted to pin points. Poisoning by chloral produces contracted pupils but not to such an extreme degree and this contraction does not persist when the individual is awakened.

Coma due to alcohol, drugs and injuries must be differentiated from coma caused by a toxic dose of chloral and is fully considered under Concussion of the Brain.

HOUSE CONFINEMENT following acute poisoning by chloral in which death ensues within twenty-four hours, does not last long enough to constitute a claim under a disability policy. Chronic poisoning does not produce house confinement, but an overdose taken by an habitual user of this drug may cause house confinement of from 12 to 24 hours.

TOTAL DISABILITY following the administration of chloral in which death does not follow, usually lasts from 1 to 2 or 3 days only, when the individual is sufficiently recovered to resume the occupation. Chronic poisoning produces short periods of 1 or 2 days of total disability at irregular intervals, and indemnity for such would not be paid by an insurance company under an accident or health policy.

PARTIAL DISABILITY following acute or chronic poisoning by this drug is rarely payable in any case.

EFFECTS: When recovery follows the accidental swallowing of chloral, such a person is insurable for all kinds of insurance from two to four weeks after all effects of the drug have disappeared. If chloral is administered in knockout drops, it would be necessary to consider the moral hazard before any kind of policy could be issued to such an individual. Habitual users of chloral are not insurable for any form of insurance and when a history of such exists and the drug has not been used for a number of years, an insurance company would wish to consider each individual case on its merits; sometimes granting all forms of insurance from three to five or ten years after the drug has ceased to be used and at other times refusing to issue any kind of a policy, even though the habit had been discontinued.

POSTMORTEM APPEARANCES are not characteristic and this is especially true when death takes place within twelve to twenty-four hours. In such cases, however, there may be a bloated appearance of the face and a congestion of the brain and spinal cord. If death ensues in habitual users of chloral, the body

is generally emaciated and degeneration of all the organs is present.

IODINE

INFORMATION: Acute poisoning by iodine is usually due to the accidental taking of the tincture, although individuals who are under treatment for syphilis and are taking large quantities of the iodides may develop an acute poisoning, but in such cases an insurance company would not pay indemnity under an accident policy. The inhalation of vapor from iodine rarely causes poisoning. From one-half to one ounce of the tincture of iodine will usually produce death and in old tinctures which have lost considerable alcohol by evaporation and much concentration exists, a smaller amount will prove fatal.

SIGNS AND SYMPTOMS following acute poisoning by the tincture of iodine are referable to the gastro-intestinal tract, as this drug acts as an irritant to this part of the body. There is headache, dizziness, a sense of constriction in the throat which is accompanied by a burning pain, together with salivation and sometimes edema of the glottis. Severe pain in the esophagus, stomach and abdomen is complained of, together with nausea, violent vomiting and purging. The contents of the stomach when vomited are usually a brownish color but if starch is present, the color becomes bluish. The pulse is rapid and feeble, the respirations shallow and quickened, while the urine is scanty and frequently entirely suppressed. If a specimen is obtained it is albuminous and contains casts. When death follows immediately it is due to respiratory failure and if this termination does not take place for several days, a widespread fatty degeneration of the tissues is observed.

HOUSE CONFINEMENT does not last more than 24 hours in cases which prove rapidly fatal. Sometimes death will not take place until several days after the poison has been swallowed; in which case house confinement usually lasts from 2 to 5 days. If a fatal termination does not follow, house confinement of 1 to 2 weeks may be necessary; this time depending on the concentration of the tincture, the amount taken, the treatment and the rapidity with which it was begun.

TOTAL DISABILITY in fatal cases of poisoning by the tincture of iodine seldom lasts more than 24 hours, although occasionally a fatal termination does not take place until from 2

to 3 or 4 days after the poison has been swallowed. When recovery ensues from 1 to 2 or 3 weeks may sometimes be required before the occupation can be partially resumed.

PARTIAL DISABILITY exists only in individuals who recover after taking a toxic dose of iodine. In such cases, on account of the inflammation produced and the more or less fatty degeneration which results, from 2 to 4 weeks of this form of disability may be required.

EFFECTS: After recovery from acute poisoning by iodine, such a person would be uninsurable for a life, accident or health policy until at least one year had elapsed; this time being necessary on account of the fatty degeneration which may ensue.

POSTMORTEM APPEARANCES show an acute inflammation of the mouth, throat and stomach, this also extending into the intestines, which are usually empty on account of the purging. The mucous membrane of these parts shows a brownish discoloration, the kidneys are highly congested and the bladder contains little, if any, urine and this is albuminous and reveals many hyaline and some granular casts. If death does not occur until two to three days after the poison has been ingested, fatty degeneration of all the organs of the body is found.

PTOMAINE POISONING

INFORMATION: Ptomaines are produced by the bacterial decomposition of animal matter and ptomaine poisoning is due to the eating of various fresh or canned meats, ice cream, milk and sea food, which have undergone more or less decomposition. This form of poisoning produces gastro-intestinal symptoms and is often mistakenly diagnosed for some other condition. The period of incubation in the majority of cases is from twelve to thirty-six hours, although some cases develop before, while others do not begin until after this period has passed.

SIGNS AND SYMPTOMS are primarily referred to the gastro-intestinal tract. Generally they show themselves suddenly, although sometimes prodromes such as headache, malaise, vague pains in the abdomen, etc., precede the attack. Whether it begins suddenly or gradually it is not long until severe pain is complained of in the abdomen and this is sometimes accompanied by nausea and vomiting. Diarrhea is one of the first early and persistent symptoms of this condition. Nervousness and weakness with muscular relaxation are present in all cases and occasionally

more or less paralysis of the lower extremities occur. The temperature usually runs from 101° to 104° F., the pulse is rapid and the urine of high specific gravity and decreased in amount. These symptoms gradually disappear as recovery takes place or collapse ensues and is followed by death.

DIFFERENTIAL DIAGNOSIS: Appendicitis, dysentery, gastro-intestinal indigestion and other diseases involving the stomach and intestines which produce pain and diarrhea must be diagnosed from ptomaine poisoning and this can generally be accomplished by the history of the case.

HOUSE CONFINEMENT following a slight attack of ptomaine poisoning does not often require more than from 3 to 5 days. Severe poisoning sometimes results in from 1 to 2 or 3 weeks of house confinement. The prolongation of this period is due in the majority of cases to the persistent muscular weakness and more or less temporary paralysis of the lower extremities.

TOTAL DISABILITY following ptomaine poisoning is not payable under an accident policy, but a general disability policy would pay indemnity for this form of poisoning, provided the individual was confined to the house at least seven days. Some few companies, however, pay total disability under a health policy when the individual is totally disabled less than seven days. Total disability of 1 week usually exists in slight cases of ptomaine poisoning, but severe ones require from 2 to 3 weeks and sometimes longer when the disability is prolonged on account of persistent muscular weakness or paralysis.

PARTIAL INDEMNITY FOR TOTAL DISABILITY if payable by the policy after the termination of house confinement is sometimes allowable and in such cases 1 to 2 weeks are usually sufficient.

EFFECTS: Ptomaine poisoning leaves no permanent effects and therefore from four to six weeks after complete recovery all forms of insurance can be safely issued.

POSTMORTEM APPEARANCES when death occurs from ptomaine poisoning are not characteristic unless an inflammation involving the stomach and intestines exists; this being more marked in the small and large intestines than in other parts of the alimentary canal.

SNAKE POISONING

INFORMATION: When poisoning results from the bite of certain reptiles it is considered accidental and is covered by an accident policy. Rattlesnakes, moccasins, copperheads and coral snakes produce the most poisonous effects of any of the snakes found in the United States. The degree of poisoning depends on the size and strength of the snake, together with the season of the year and the physical condition of the person bitten. It is said that snake venom is in the form of a toxalbumose and this is ejected from a small slit-like opening on the convex surface of the fangs of these reptiles.

SIGNS AND SYMPTOMS: Immediately after the part is bitten there is apparent small needle-like punctures and this is soon followed by a burning, stinging sensation and swelling of the tissues surrounding the bite or the whole extremity when it is on the hands or feet. As the swelling increases the pain becomes intense and is accompanied by nausea and vomiting. Great thirst is complained of and evidence of collapse supervenes, with a rapid and weak pulse, hurried respirations, muscular relaxation and a cold perspiration which covers the entire body. Much nervousness and mental irritability are present. When sufficient poison is injected to cause a fatal termination the collapse is succeeded by coma and sometimes convulsions and death which is due to respiratory failure or exhaustion. If recovery takes place a reaction sets in and the individual soon passes beyond all danger of a fatal termination from the bite.

DIFFERENTIAL DIAGNOSIS is seldom difficult, for the reason that the individual distinctly remembers being bitten by a snake and almost invariably sees the reptile. In addition the marks of the teeth are characteristic, there being at least four punctures and when more are present they are not in parallel lines but form the sides of a triangle. Insect bites do not cause the pronounced constitutional signs and symptoms as do snake bites and only one point of puncture is present.

HOUSE CONFINEMENT in fatal cases resulting from snake bites seldom lasts more than 1 to 2 days, the majority of such cases terminating within twelve hours. When death does not ensue, house confinement of from 1 to 2 or 3 days is usually ample.

TOTAL DISABILITY following a fatal case of snake bite does not end in a claim for weekly indemnity, but one for the

death indemnity payable by an accident policy under such conditions. When recovery takes place from 3 to 5 or 7 days are necessary before the individual is able to resume part of the occupation.

PARTIAL DISABILITY of 1 to 2 weeks may sometimes be demanded when poisoning from a snake bite has been especially severe and exerted its main effects on the blood, causing much weakness to result.

EFFECTS: If a history is elicited of an individual having suffered from a snake bite and recovery follows without any untoward symptoms, such a person is insurable for all forms of insurance three to six weeks later, provided the possibility of a recurrence of the exposure is eliminated.

POSTMORTEM APPEARANCES: Rigor mortis appears immediately after death and is very characteristic. At the point where the bite occurred the tissues have usually been cut out by a surgeon; if not, gangrene is present. The bitten part is badly swollen and discolored and when this occurs on the extremities —as it generally does—the whole extremity shows this condition. The blood loses its coagulability and hemorrhages occur into the soft tissues and even into the bones, causing a discoloration to exist Hemorrhages also occur into the intestines. If any urine is found in the bladder it contains disintegrated blood.

PART IV

GASES

CARBON DIOXID

SYNONYM: Carbonic acid gas.

INFORMATION: Carbonic acid gas not infrequently causes accidental death to those who unconsciously inhale it. This gas is odorless and heavier than air, but when mixed with the latter and heated, it becomes lighter and ascends. Carbonic acid gas is the result of the oxidation of organic matter by the process of decay and by combustion and is produced by oxidation of the tissues of the body and consequently exhaled. It is also formed during fermentation, the burning of limestone and by the

action of acids on carbonates. The gas often accumulates in beer vats, old wells, caverns, mines and places which have not been used for some time. When it exists in conjunction with the atmosphere in a confined depth, it will prove fatal if the flame of a candle is extinguished when placed where this gas exists and when this occurs, carbonic acid gas is present in at least eight to ten per cent. If the pure gas is inhaled death takes place immediately, but when diluted with air a fatal termination may not ensue for several hours.

SIGNS AND SYMPTOMS: When this gas is inhaled in a pure or concentrated state, death from asphyxiation takes place at once. Spasm of the glottis due to the gas may cause death by preventing further inspiration and should a sufficient amount be inhaled, the individual falls unconscious, with complete muscular relaxation. If the gas is breathed in a more or less diluted form and the person is removed to the open air before death takes place, a tingling sensation is complained of in the nose and throat, with headache, dizziness, ringing in the ears and a sense of oppression, together with drowsiness and loss of muscular power. The face is livid or cyanotic, the pupils are dilated and rarely nausea and vomiting occur. As the effects of the gas show themselves the heart is first stimulated and then gradually becomes weaker, until the pulse is imperceptible. Breathing in the early stages of the poisoning is deep and slow and passes from this to weak, shallow and rapid respirations. If the inhalation of the gas is continued, profound coma ensues and sometimes convulsions precede the death.

DIFFERENTIAL DIAGNOSIS by asphyxiation due to carbon dioxid is generally made from the history of the case and the absence of odor, but the cause of the asphyxiation is never important if the individual is seen before death takes place, all cases being treated by removal to the open air and artificial respirations, together with stimulants when needed. The diagnosis in such cases is made in ample time if the cause of the asphyxiation is determined after death or when recovery ensues.

HOUSE CONFINEMENT is not present in rapidly fatal cases of poisoning by carbonic acid gas and no weekly indemnity would be payable under an accident or health policy in any case. If recovery follows house confinement hardly exists, as the individual by necessity must remain in the open air as much as possible. This may sometimes be construed as house confinement and under such circumstances seldom lasts over 2 or 3 days.

TOTAL DISABILITY does not exist in fatal cases of poisoning by this gas, but if death was accidental in origin, the fixed amount specified in an accident policy would become due to the heirs of the claimant. When a fatal termination does not follow the inhalation of carbonic acid gas, total disability of from 2 to 5 days is usually ample.

PARTIAL DISABILITY is not deserved in accidental poisoning by carbon dioxid.

EFFECTS: When death does not follow the inhalation of carbon dioxid and the liability of a recurrence of this form of poisoning is eliminated, such a person would be insurable for all forms of insurance from three to six weeks after complete recovery.

POSTMORTEM APPEARANCES: If death results from the inhalation of carbonic acid gas the body is usually swollen and livid in appearance, although the face is occasionally pale and in repose. The pupils are dilated and postmortem rigidity comes on quickly. The right side of the heart, together with the lungs and large veins of the body are engorged with venous blood which does not coagulate readily on exposure to the air. Engorgement of the blood vessels of the brain exists and is sometimes accompanied by a serous effusion.

CARBON MONOXID

SYNONYMS: Illuminating gas; coal gas; water gas; carbonic oxid.

INFORMATION: Poisoning due to the inhalation of water gas, coal or illuminating gas is due to the carbon monoxid which they contain and therefore the different names are given as synonyms of this gas. Asphyxiation either by accident or intent is usually due to the inhalation of illuminating gas and the unconsciousness produced by it is caused by the poisonous carbon monoxid with which it is mixed; it usually being present in about twenty-two per cent. This gas may also be inhaled in toxic amounts, when it is given off during the incomplete combustion of coal, charcoal or wood. Poisoning due to the inhalation of gas containing both carbon dioxid and carbon monoxid may also exist, but in such cases the carbon monoxid produces the more marked symptoms.

SIGNS AND SYMPTOMS: After the inhalation for a variable length of time of carbon monoxid, symptoms which resem-

ble poisoning by carbon dioxid appear. There is dizziness, ringing in the ears, extreme muscular relaxation and oftentimes tremors and twitching of the muscles. The face is flushed, the heart is stimulated, drowsiness occurs and is followed by an irresistible desire to sleep. The breathing which is at first normal in character, gradually becomes slow and deep. When this gas has been inhaled for some time, dilatation of the peripheral blood vessels ensues and results in hemorrhages under the skin. If any of these gases are inhaled in poisonous amounts "the carbon monoxid unites with the hemoglobin of the blood, displacing the oxygen and producing what may be termed an internal asphyxiation." (Riley). The complete muscular relaxation which exists is said to be due to the action of the gas on the nerve centers. Fatal results follow the inhalation of air laden with carbon monoxid in various quantities and recovery may follow when this gas has been inhaled for a considerable time, provided it is sufficiently diluted with air. When death occurs after the inhalation of illuminating gas—which is escaping into a room where outside air is not admitted—it usually takes place within one to two hours and when illuminating gas is diluted and inhaled sufficiently long to produce a fatal result, death may not follow for four to six or ten hours.

DIFFERENTIAL DIAGNOSIS between asphyxiation due to carbon monoxid or carbon dioxid is seldom made until after death and a postmortem examination is held, when the condition of the blood is usually sufficient for this purpose.

HOUSE CONFINEMENT following rapidly fatal cases of poisoning by illuminating gas, does not exist long enough to produce a claim under a general disability policy. If recovery ensues, modern treatment demands that the individual be kept in the open air as much as possible, but this would sometimes be construed by an insurance company as house confinement and seldom lasts more than 1 to 2 weeks.

TOTAL DISABILITY does not exist when carbon monoxid is inhaled in a sufficient quantity to produce death and weekly indemnity is not payable under a health or disability policy. If the gas is accidentally inhaled and death results, weekly indemnity is not payable under an accident policy, but the amount specified in the policy becomes due. Should recovery ensue, total disability is generally prolonged and may last from 1 to 3 or 4 weeks and sometimes much longer, on account of sequelæ that may follow the inhalation of this gas. Insurance companies, therefore,

endeavor to secure a release when any liability exists after the accidental inhalation of carbon monoxid at an early date, because of the possible impairment of the mental activities.

PARTIAL DISABILITY following the accidental inhalation of this gas may sometimes be required in non-fatal cases in the settlement of a claim under an accident policy, and in such cases from 1 to 2 or 4 weeks may be demanded and become payable.

EFFECTS: When an individual has accidentally inhaled illuminating gas and recovery follows, insurance of all kinds cannot be safely issued to such a person until at least one to two years after the date of inhalation and not even then until after a medical examination shows the physical condition to be normal and the possibility of a recurrence of the accident is eliminated.

POSTMORTEM APPEARANCES: The body is generally swollen and postmortem rigidity appears early. The pupils are dilated and the face flushed in appearance and rose-colored spots due to hemorrhages under the skin are seen covering the entire body. When the body is first opened the odor of gas is apparent but this disappears in time. After poisoning by carbon monoxid the condition of the blood is characteristic and sufficient for diagnosing death by illuminating gas. When this gas is the cause of the fatal termination, the blood is bright red in color and has lost its power of coagulating. The organs of the body—especially the brain—are softened and rapidly undergo decomposition.

HYDROGEN SULPHID

SYNONYM: Sulphuretted hydrogen.

INFORMATION: Hydrogen sulphid is a colorless gas with a strong penetrating odor, resembling that given off from rotten eggs, and consequently accidental poisoning from its inhalation never occurs except in the concentrated form. This gas results from putrefaction of animal matter and is usually combined with others, being one of the principal constituents of sewer gas.

SIGNS AND SYMPTOMS: When hydrogen sulphid is inhaled in the concentrated form death quickly results and is due to the narcotic action of the gas and its effect on the nervous system. If breathed for a few minutes the individual falls unconscious and respirations quickly cease, although the heart continues to beat a short time after breathing stops. Sometimes recovery follows if the person is promptly removed to the open air.

Laborers working in trenches and sewers in which this gas is present in a very diluted form, complain of headache, cough, difficulty in breathing and burning sensation of the eyes, nose and throat. When the gas is not so diluted the above signs and symptoms are soon followed by nausea, sometimes vomiting, muscular weakness, unconsciousness and death. If the gas is inhaled in a more or less diluted form, its effects may not become apparent until after the individual has left the place where the gas is present and sometimes not until after fifteen to thirty minutes have elapsed. Inhalation of the concentrated gas produces death within a few minutes, the individual rarely living longer than ten minutes after the inhalation has begun. In a more or less concentrated form death may not take place until one to two or three days later.

DIFFERENTIAL DIAGNOSIS is usually made without difficulty on account of the odor which is present and which is noticed by any one in close proximity to the source of the gas. The breath often reveals the odor of this gas for some time after it has been inhaled.

HOUSE CONFINEMENT after the inhalation of concentrated hydrogen sulphid does not exist as death occurs at once. When the gas is inhaled in a diluted form, house confinement may last from 1 to 3 days and be terminated by death. If this does not take place and recovery follows, house confinement depends on the degree of concentration of the gas and the length of time it has been inhaled. Usually in poisoning by hydrogen sulphid absolute house confinement does not exist, as modern medicine demands the open air treatment, although in such cases an insurance company would generally be liberal in construing the term house confinement and allow from 1 to 2 weeks for this form of disability.

TOTAL DISABILITY is not payable under a health or disability policy when death ensues, but if this termination is accidental in origin the amount specified in an accident policy would become due. Oftentimes death does not occur immediately but takes place within 3 days after the inhalation of the gas. Should recovery follow the inhalation of hydrogen sulphid total disability varies, lasting from 1 to 2 or 3 weeks; this time depending on the length of time the gas was inhaled, its degree of concentration and physical condition of the individual.

PARTIAL DISABILITY would seldom be payable under an accident policy following the inhalation of this gas.

PARTIAL INDEMNITY FOR TOTAL DISABILITY if payable by a health or general disability policy after the termination of house confinement, sometimes requires from 1 to 2 or 3 weeks.

EFFECTS: After poisoning by hydrogen sulphid, such a person would be considered uninsurable for a life or health policy until at least three to six months had elapsed; this being due to the action of the gas on the red blood corpuscles rendering them incapable of carrying oxygen to the tissues. Accident insurance in such cases, however, could usually be issued with safety from three to six weeks after the occupation was resumed.

POSTMORTEM APPEARANCES are not characteristic, the body presenting externally no evidence of the cause of the death. A brownish viscid mucus is often found covering the mucous membrane of the nose and throat, the lungs are engorged and filled with dark fluid blood, which has lost its power of coagulating. The right side of the heart is also engorged and filled with blood of the same character. Oftentimes when death does not follow immediately, minute hemorrhages occur in all parts of the body, causing a brownish discoloration of the tissues. Postmortem rigidity is slow in appearing and putrefactive changes take place rapidly.

CHAPTER XXII

ADJUSTING CLAIMS FOR DISABILITY RESULTING FROM ACCIDENTS OR DISEASES

PART I

ACCIDENT CLAIMS

A successful accident insurance company is one in whom its policy holders have confidence and who are pleased and satisfied with the treatment accorded them in the settling of their claims. These claims arise whenever a policy holder suffers from an accident, even though it may be so trivial that no liability exists on the part of the company to pay any indemnity, the claimant not being either totally or partially disabled for a sufficient time to entitle him to indemnity, but the claim must receive attention and it must be some one's duty to pacify those who make claims under a misunderstanding. For this purpose, accident insurance companies have employees who are known as adjusters and whose business it is to adjust and settle any claim arising under an accident policy. An adjuster is usually a man of good address, pleasing manners, one who can make himself agreeable with any claimant and who knows thoroughly the conditions of the policy under which he is attempting to make a settlement. In addition to adjusters, insurance companies permit their general agents and in some cases the examiners to make settlements of claims arising under accident policies. A physician who examines for an insurance company and knows the policy forms in addition to being able to handle different individuals in the proper way, makes an ideal adjuster, for the reason that his medical knowledge teaches him the probable duration of the disability as suffered by the person with whom he expects to make an adjustment. In addition to his medical qualifications, he is in a better position to make a settlement of the claim immediately after he has made the examination, as claimants who are suffering from a more or less trivial injury that will cause total or partial dis-

bility of one to three weeks are usually in a better frame of mind for a settlement at this time than if the doctor has to make the examination and send in his report to the office, and his visit in turn is followed by the adjuster who may arrive from one to seven days after the doctor's visit and during which time the claimant's condition has not improved as much as anticipated. A doctor in making an adjustment must be prepared to use all the qualifications possessed by an adjuster without a medical education, and these include knowledge of policy forms, tact and ability to protect the interest of the company and satisfy the claimant; as by a successful adjustment, the company not only gains in dollars and cents, but also gains new policy holders by paying the proper amount for a claim, thus advertising the business and also the fact that that particular company pays its claims fairly and promptly. A physician who makes a successful adjuster for insurance companies is one who is always ready to listen and learn anything about adjusting, but who never talks about the business of one company to the agent or representative of another company.

DEFINITION OF AN ACCIDENT: All accident insurance policies define an accident as "an injury which may be serious or trivial in character, but which occurs to an individual through *external, violent and accidental means.*" A number of definitions for the word "accident" have been formed by different individuals, the following of which is considered a very good one: "An event which takes place without the over-sight or expectation of the person acted upon or affected by the event." The Century Dictionary states that an accident is in general, "anything that happens or begins to be without design, or as an unforeseen effect, an undesirable or unfortunate happening; an undesigned harm or injury; a casualty, a mishap or a happening without intentional causation." An individual who carries an accident insurance policy and expects to make a claim for indemnity must therefore suffer from an injury defined as above and which has been sustained by him through external, violent and accidental means. As for example, in walking along the street a slip of the foot occurs which is followed by a fall and a sprain of the ankle. This is an accident pure and simple, the individual slips accidentally, falls violently and sustains an injury which is visible externally. If the same individual is walking calmly along the street and feels something give away in his leg and this is followed by disability, he is not entitled to indemnity under an

accident policy, because the injury which may be a tear of the muscles of the leg is not sustained by violent or accidental means. Some persons claim indemnity for accidents when the disability is due to over-exertion, such as a sprained back due to lifting in which there is no history of an accident, the injury being the result of a test of strength. Physicians often claim indemnity under an accident policy when disability is caused by blood poisoning and the infection is due to absorption through an open wound which is not produced at the time the infection occurs. Such cases are not covered by an accident policy as the infection has not been sustained in a violent, external or accidental manner, but follows the entrance of poison to the circulation by means of an open wound which has been existing prior to the time that the infection began.

KNOWLEDGE OF POLICY FORMS: If an examiner expects to adjust accident claims for an insurance company, he must make himself familiar with the policy forms as issued by the company for which he is adjusting. If he does not know the conditions of the different policies, it is an impossibility for him to make a satisfactory adjustment either to the company or the claimant. It is not sufficient to know that an injury to be covered by an accident policy must be produced by violent, external or accidental means, but the important parts of the policy must be known, especially that part which defines total and partial disability and a number of other conditions which are essential for a successful adjuster to know and which are described under Chapter IV. A number of insurance companies at the present time are duplicating the policies of all other competitors. This makes it impossible for any one to carry in mind all the conditions of the different accident insurance policies, but if a physician will learn the important ones, he can usually depend on that knowledge for the purpose of making a settlement when the policy as held by the party is not at hand for reference.

EARLY ADJUSTMENT: It is recognized by every insurance company and corporation that an early adjustment of a personal accident claim against them is to their best interest and the quicker a settlement can be effected and the claim paid and the papers put away, the less will it cost the company for that particular case. This is especially true in accident insurance where advance settlements are often possible. When an individual suffers from an accident that will cause total or partial disability to last from one to three or four weeks and there will be

no permanent impairment of the function of the parts injured, it is almost always possible to secure an advance settlement and especially if the adjuster knows how to handle the party who has been injured. Advance settlements in accident cases benefit the company greatly in many ways, chiefly by advertising and reducing the amount paid out on claims. It soon gains a reputation of paying its claims promptly and this alone is sufficient to increase its business and especially when these claims are paid in advance, the company gets more credit for an early and equitable settlement of its obligations. The company not only gains by increasing its reputation and enlarging its business, but also gains financially, as the claimant, if not paid in advance has no incentive to return to work earlier than is absolutely necessary and does not do so, but waits until he—and perhaps an obliging doctor—is sure he is fully recovered. If a claim is paid in advance, the injured party will go back to work before the termination of the time for which he has been paid if he can possibly do so and this will be done without any injury to himself or the company which, although it may settle a number of claims in advance and pay for a day or two more than the individual required and thus apparently lose that time, yet will gain in the end, as claims settled after the termination of disability are always for a longer period of time than if settled in advance. The claimant is benefited by an early adjustment in having the use of the money which is paid him during the period of his disability and at a time when his income has ceased or is continued through the charitable feelings of his employers. If the disability ends before the time for which the indemnity has been paid, the claimant is perfectly satisfied with himself and the company as he believes he has made a sharp settlement with them and has been paid for time that he was not disabled. If his disability persists longer than anticipated, he usually considers that he has had the use of his money during the time that he was laid up and is rarely dissatisfied because he was not paid for the full time disability lasted. An early adjustment therefore is most desirable for an insurance company, allowing them to get rid of the case and permitting attention to be given to other matters, and at the same time reducing the cost of the claim and advertising the company as one which pays its claims promptly and in advance.

MANNER OF ADJUSTMENT: Experiences teaches a physician or adjuster the manner in which to attempt an advance settlement of the various cases that are selected for this purpose.

It is not always to the best interest of the company that an early adjustment be made; for example, if an individual is suffering from a fracture of the femur, a physician or adjuster will hardly attempt to make an advance settlement as it would be almost impossible to anticipate the correct time that such an individual would be disabled and prevented from doing all or part of his occupation. Sometimes, however, even in these cases there are conditions such as poverty, the probable loss of the leg or a death within ninety days that would cause an adjuster to attempt to force a settlement. In the first case, it would be to the advantage of the claimant while in the latter two, the company would be saved such a great amount of money in excess of the amount that would have been paid out for the loss of the leg or loss by death, that it can afford to take chances on any criticism that may arise. Individuals who are disabled by accidents which are so severe that the disability will last for months and perhaps terminate in death should always be settled in advance if possible, by the adjuster securing a release for the company at the smallest possible figure, even though at the cost of considerable criticism, as criticism does not pay the expenses of running an insurance company and money which can be saved is that much earned.

There are a number of ways of coming to an adjustment with the claimant and different adjusters have different methods of doing this. A good adjuster will use all methods, adapting each one to the individual case under consideration. Some adjusters ascertain the probable length of duration of disability before seeing the case and then learn from the party the time demanded. With these two extremes in view, an amount is agreed upon and paid. Another way is for the adjuster to offer a certain figure to the claimant and induce the party to accept that amount or a slight increase. Adjusters usually base their settlements on days and weeks of total or partial disability, and then compute the amount in dollars and cents according to the time allowed. Sometimes, however, an adjuster will offer a lump sum for the settlement of a case, but before doing so he has secured the probable length of disability and counted in his own mind the amount of indemnity payable, although this is not always necessary as he may know from experience that his company is willing to pay a certain lump sum for a specified injury which occurs to an individual who is carrying a policy for a certain amount. If a physician himself is adjusting the case, in order that the claimant may not think that any advantage is taken of him, it is always well to

ask for the prognosis of the attending physician, as this tends to show that the examiner has no intention of using his medical knowledge to gain an unfair advantage over the claimant. If the prognosis of the attending physician is below that of the examiner and he thinks such a time would be a fair settlement, the amount can be paid at once and the case closed. Should the attending physician's prognosis be too long,—and this is usually the case—the examiner can explain to the claimant his reasons for thinking differently and in many cases convince the injured party that the prognosis as given by the attending physician is excessive and thus secure an advance settlement. In making an adjustment of an accident claim, it is necessary that the adjuster know the claimant's weekly income from his occupation and also know the amount of insurance carried by the individual, for the reason that accident insurance policies contain a clause whereby the company is liable only for its proportionate share of the weekly loss of wages suffered by the claimant; in other words, if an individual is making Twenty-five Dollars per week and carries two policies each paying Twenty-five Dollars per week or Fifty Dollars in all, and he is laid up one week, each company would pay Twelve Dollars and Fifty Cents thus making Twenty-five Dollars the amount that the claimant would have earned had he been at his usual occupation. This provision is necessary for the purpose of preventing the prolongation of claims and must not be overlooked in any case when a settlement is effected.

MANNER OF PAYMENT: Settlements are usually made by paying cash, check or draft. Accident companies doing what is known as an industrial accident business or that class of business where they insure their policy holders by the week or month, usually pay their claims in cash, as this class of people are not familiar with checks or drafts and a cash payment is much more desirable and convenient to them than any other. Companies insuring the better class such as merchants, lawyers, physicians, etc., generally pay their claims by checks or drafts; this depending on the custom of each individual company. In whatever manner these claims are paid, however, each company takes what is known as a release and this releases the company from all liability of any claim for damages arising under the accident for which indemnity has been paid. These releases are printed on separate paper for cash payments and the same method is also used by some companies when payment is made by check or draft, while others have the release printed on the back of the check or draft

and by the indorsement of the paper, the individual releases the company for that particular claim.

PROVISIONAL SETTLEMENT: An examiner of an insurance company who is not authorized to settle cases can frequently assist his company very materially by securing a provisional settlement and by this is meant, ascertaining from the claimant the amount of time that would be satisfactory for total and partial disability, if one or both exists. When such a settlement is secured by the examiner, great care must be taken in telling the claimant that the amount of time that has been fixed between himself and the examiner will be stated to the company, but not recommended to them as being considered satisfactory by the examiner. If the examiner in agreeing upon the time for the settlement of the disability, should say to the claimant that he would recommend that time to the company, he places the insurance company in a position that they must either pay that amount or cause dissatisfaction. The home office officials may consider the time as agreed upon by the doctor and the claimant as entirely too long and refuse to pay it. If the claimant is notified that such action has been taken, he immediately becomes dissatisfied and states that the examining physician of the insurance company recommended that he receive a certain amount, and the company is often compelled to pay the claim at a figure which they consider too high or cut it down with resulting dissatisfaction. If the examiner has been careful to tell the claimant that he would simply inform the company that the amount agreed upon would be acceptable to the claimant and not say that he would recommend it, the company could take whatever action it considered necessary and the claimant is not in a position to say that the examining surgeon of the insurance company recommended such an amount for his claim and the company would not pay it. These provisional settlements if properly made, assist an insurance company very much and at the same time the examiner receives credit for looking after the interests of the company, thus increasing his standing with them; while if such settlements are made in an unskilful and unsatisfactory manner, he is censured and probably requested to abstain from attempting an adjustment in future cases that he may be asked to examine.

ABILITY TO DETECT FRAUDULENT CLAIMS: Accident insurance policies are sold by agents who are paid a commission on every policy they sell, and it is therefore to their interest to sell as much insurance as they can. A great many agents

are conscientious and will not sell an insurance contract to an individual whom they do not consider trustworthy or one whom they know is not a desirable risk, but a number of them are not so constituted and will place a policy with any person whom they can get to pay for it. For this reason there are individuals carrying accident insurance who are not of the highest integrity and who are generally on the alert to defraud an insurance company at the slightest opportunity. This condition of affairs does not exist altogether among the class of people who would take advantage of every trivial injury, but can be found among the very best class in the community. There seems to be a sentiment prevailing among a number of people that it is no crime or theft to beat an insurance company out of a large or small amount of money and a number of individuals will not hesitate to claim indemnity and push the payment of their claim for slight accidents or prolong the period of disability unnecessarily, when they in their own minds know that they are not rightfully entitled to the amount demanded. This is a condition which should not exist but which unfortunately does exist among a large number of claimants. For these reasons, a physician who is examining for an insurance company can never tell when he may be called upon to detect a fraudulent claim. The fact that he is examining some one who holds a respectable position in the community does not permit him to be negligent in any part of his examination, as he may find a fraudulent claim among any class of people. These claims, however, which are fraudulent in intent from the beginning are usually found among the lower classes who would not hesitate to secure indemnity or get back some of the money they have paid the insurance company at every opportunity which presents itself. A successful insurance examiner is one who is constantly on guard for fraudulent claims and who has the ability to detect them, and when found does not hesitate to transmit his opinion to the home office of the company. Opinion alone, however, that a case is fraudulent is not sufficient and the examiner must endeavor, if possible, to produce proof that his opinion is correct and that the claimant is demanding indemnity for something that is not covered by his policy.

PART II

HEALTH CLAIMS

The method of adjusting claims for disability when the individual is covered by a health policy, is entirely different from that of adjusting accident claims, and while a local adjuster may be able to make a satisfactory settlement of practically all claims arising under an accident policy, he is usually incompetent to settle health claims and for this reason very few companies permit these claims to be settled outside of the home office. An adjuster or some home official who settles health claims, must know more or less about all diseases, that is to say, he must have a working knowledge of the synonyms of diseases, the prominent signs and symptoms, the usual complications, with the length of time disability is prolonged by them, the diseases which are venereal in origin, etc. When a claim for disability caused by sickness is received by an insurance company, it usually asks for an examination of the claimant by its examining physician, and if the information thus secured indicates that the disability is going to last from two to four weeks, no further attention is given it until about the time it should terminate, when the completed claim papers are received or the claim examiner seeks further information concerning the prolongation of disability. When these papers are received at the home office, they contain in addition to the statement of the claimant, a statement of the attending physician which gives the length of time house confinement lasted, together with the duration of total disability, and some companies demand the length of time the individual is convalescing and not confined to the house, but unable to attend to any part of the duties of his occupation. Under these circumstances, if the claim is an average one for the disease, it is usually settled by the claim examiner sending to the claimant a check or draft from the home office of the company. Thus it will be seen that these claims of average duration are generally paid on the certificate of the attending physician. Companies usually require a certificate from the agent stating these facts, but as the agent in most cases simply makes out these statements after having received information from the attending physician as to the contents of his report, they are of little use except perhaps to serve as a

check on the agent. Some companies permit a few of their examiners to settle health claims, but these physicians are of course adjusters and are thoroughly familiar with the terms of both accident and health insurance policies, and are therefore just as competent to settle health claims, as the claim examiner at the home office. When a company permits settlements of this kind, it is sometimes possible for the examiner and adjuster of the company to settle a case at or before its termination by giving a sight draft on the company for the probable amount due.

DEFINITION OF DISEASE: Health or sickness policies as issued by insurance companies, promise to pay the holder a specified sum for disability incurred under certain conditions The main one of which is, that the individual must be disabled from engaging in any work or occupation for wages or profit by reason of a disease Some policies specify a certain number of diseases for which indemnity is payable and unless the disability is caused by one of the diseases enumerated in the policy, the individual is not entitled to indemnity. When an individual carries a general health policy, he is entitled to indemnity for disability which is produced by any disease, provided the other conditions of the policy are observed. A disease is considered to be a "deviation from the health or normal condition of any of the functions or tissues of the body. It is a morbid, painful or distressing physical condition which may be acute or chronic and which may result in death or in a more or less complete return to health." Even though an individual may not suffer from a well developed disease, but only have the signs and symptoms of a certain illness in a mild form and these cause disability, he is entitled to indemnity under a general health policy, provided there is nothing in the policy to the contrary.

KNOWLEDGE OF POLICY FORMS: When an insurance company permits its examiner to adjust and settle claims arising under a health or disability policy, it does so after the examiner has proved himself a good adjuster of accident claims and has shown that he has become acquainted with the conditions of health policies. Limited health policies pay indemnity for certain diseases which are named therein. General health policies pay for disability caused by a disease,—subject to certain conditions of the policy,—among which are, that the claimant must be totally disabled for at least one week; and total disability shall not be payable unless house confinement existed; some pay partial indemnity for total disability following a period of house con-

finement or for the time that the claimant is convalescing from a disease. A number of companies now issue health policies which pay indemnity for disability under one week and some policies do not require house confinement.

A health policy does not become effective until a certain length of time has elapsed after its date—from fifteen to ninety days—therefore, this is also one of the important conditions that must be known and remembered. A physician who can adjust an accident claim and who has become familiar with the conditions of the different kinds of health policies should make a good adjuster of health claims; but it can be readily understood by the few examples enumerated above, that this branch of adjusting is much more difficult and requires a better knowledge of the construction of health policies than if the claim existed under an accident contract.

ADJUSTMENT: If an individual is suffering from a disease, it is almost impossible to tell the exact time when he will have recovered; therefore, early settlements in health cases can only be effected when the disease is one which will cause disability to probably last from one to two or three weeks; such cases as grippe, bronchitis, lumbago and a few of the diseases of childhood which occur in adults, come under this category. An early settlement of a health claim is not always advisable from the viewpoint of the company, on account of the uncertainty of the duration of the disability. If an individual settles his claim in the early part of his illness and is disabled from one to three weeks longer than is anticipated, it is almost certain that the company will be requested to pay the additional amount and if not paid, dissatisfaction results. It is the practice of a number of adjusters who have the authority to settle health claims, to never settle in advance a claim for disability under a health policy which is going to last from one to three months or more. In such cases, the adjuster will wait until the termination of the disease has about arrived, when he will be better able to estimate the probable length of the remaining disability and thereby effect a settlement that is satisfactory to the company. In some cases where disability exists and is covered by a health policy, and it is apparent that this disability will continue to last and exceed the limit of the policy, it is sometimes possible to settle the case some weeks in advance of the termination of liability on the part of the company by the payment of indemnity for practically the limit of the policy, even though one to two or three weeks only are cut off from the

amount that would eventually have to be paid the claimant, it is that much of a saving to the company, and as the individual receives the money from one to two or there months in advance, he is usually willing to accept this loss of a week or more and have his indemnity when it will do the most good.

THE MANNER OF ADJUSTING HEALTH CLAIMS depends on the disease which is causing the disability. If it is thought that the disability will be short, lasting only from one to two or three weeks and the opinion of the attending physician has been ascertained and found to concur with that of the examiner, then it is possible in some cases to secure a settlement, by agreeing upon a time with the individual who is disabled, paying the claim and taking a release at once When the disease is one that will cause disability to last from three to six or eight weeks or more, it is rarely possible to secure an adjustment until near the termination of the disability, when the examiner should consult with the claimant and the attending physician, and agree upon a time for which total disability is to be paid and also partial indemnity for total disability, if the policy provides for that contingency. In such cases, the company usually requires that the claimant and attending physician fill in a claim blank which is furnished them, and then, after this claim blank has been sent to the home office and passed upon by the claim examiner or medical director, the amount is allowed and a check or draft delivered to the claimant, at the same time securing the release. Claimants under a health policy will seldom make a settlement with an insurance company for disability due to sickness, until after they have consulted the attending physician and learned his views as to the length of time that disability will probably continue. It can therefore be seen that the manner of adjusting a health claim is entirely different from one arising under an accident policy and it practically means in all long cases of disability, that the termination must be awaited before a settlement can be effected.

MANNER OF PAYMENT: Health claims are paid by cash, check or draft and in each case when paid, a release is secured from the claimant. Some companies doing what is known as an industrial accident and health business, pay some of their claims weekly, that is, in a case which will probably last from two to four or six weeks, the company advances the amount due each week, thus enabling the policy holder who is usually in poor circumstances, to pay part of his expenses as they are incurred. It is questionable if this method of making partial payments on

health claims is advisable or not. It may and probably does help to advertise the company and thus secure some increase in business, but it certainly does not reduce the amount of claims, as an individual who is ill and belongs to the laboring class is not going to return to work any earlier than is absolutely necessary, especially if he is receiving from an insurance company the amount due him weekly. He has no incentive to return to work, for the reason that he probably receives almost as much while being sick as he would receive if he was attending to his usual occupation, and he considers that he is having a vacation and is perfectly willing to remain away from work as long as possible, even though his income may be somewhat restricted.

FRAUDULENT CLAIMS under health policies are not as frequent as under an accident policy. There are, however, a number of cases of illness which are trivial or of short duration and which are prolonged beyond the time they should be, and thus the claim for indemnity, while not fraudulent in the beginning is fraudulent, inasmuch as it is prolonged beyond the time the disability actually lasts. Some diseases admit of fraudulent claims much more readily than do others, such as neurasthenia, lumbago and similar illnesses in which there is no external evidence of the disease, but only symptoms which are claimed by the individual and which may not exist. All claims for neurasthenia, muscular rheumatism, dysentery, etc., should be most closely investigated, as an examiner may find a fraudulent case under the most unexpected conditions. To be able to detect these fraudulent claims, it is necessary that the examiner be thoroughly familiar with all the signs and symptoms of different diseases and also know how to apply different tests for the purpose of verifying the statement of the claimant, thus proving that the individual is suffering from the disease and is not simply making a claim for disability which does not exist.

DIFFERENTIAL DIAGNOSIS: A successful insurance examiner who examines many health cases for an insurance company, is one who is thoroughly competent to make a differential diagnosis on the first visit and to do this, he must be well read on the signs and symptoms of all diseases, if not, it is impossible to make a correct diagnosis or to detect fraudulent claims when they arise. Insurance examiners are usually paid by the company for one visit only, and at that time they are expected to make a differential diagnosis and this is extremely difficult in a number of cases, especially when the claimant is ignorant or is a foreigner

and is unable to make himself understood or when there is an attempt at fraud and the claimant will not answer questions or will answer them in an untruthful manner. The examiner must frequently depend altogether on his power of observation and ability to diagnose the disease from the physical signs alone, and in some cases this is very difficult. A good examiner in such cases will use every method known to science that will assist him in making a proper diagnosis, and he must be prepared and be familiar with all the latest methods and instruments which may be required for this purpose.

PART III

LIABILITY CLAIMS

A liability claim is one arising from an injury sustained by some one who is not insured by the insurance company which is liable for the acts or negligence of the employees of another corporation, and therefore in adjusting such a claim there is no contract existing between the injured party and the insurance company or the corporation which may be liable for the injury sustained by the claimant. This condition of affairs places the claimant in an entirely different light toward the insurance company than if a contract existed between them for the purpose of settling a claim under such conditions, it is therefore necessary that some one who is skilled in the law of liability, either an attorney or one who has made a study of this branch of the law, be employed for this purpose and this makes it imperative that insurance companies have a separate department for the settlement of this class of claims. Physicians who are good examiners and good adjusters of accident and health claims, when these claims arise under accident and health policies are not competent except in rare instances to make an adjustment for a liability case, unless some one who is competent to pass on the question of liability of the company first decides that the company is liable; in which case an examiner may sometimes be able to secure an adjustment after having been given the limit that the company would pay for a release. There are very few physicians who are permitted to settle liability cases and these few are usually men who have made a special study of the law of liability and who are

engaged in that branch of the work all the time, not even adjusting accident or health claims under personal accident or health policies; and it is not deemed advisable by those in authority with insurance companies that a physician attempt this branch of the business. If an individual has been injured through the negligence of another party and that party is covered by a liability policy which is issued by an insurance company, almost the first move of the injured party in the majority of cases is to consult an attorney and place the case in his hands. When such action is taken it can readily be seen that a physician is not competent to handle the case. An attorney for the company or one who is familiar with the law and has had much experience in adjusting in this line, must be selected; if not, an insurance company would soon be paying out so much money on trivial claims and ones in which the liability was doubtful, that the premiums would be required to be increased to such an extent that the company would be forced to stop writing that branch of the business, being unable to compete with other companies whose claims were passed upon by a competent liability adjuster.

CHAPTER XXIII

METHODS OF SECURING APPOINTMENTS AS EXAMINER FOR INSURANCE COMPANIES, AND WHEN APPOINTED, HOW TO COMMAND EXAMINATIONS IN COMPETITION WITH OTHER PHYSICIANS

The desire on the part of physicians to be appointed medical examiners for insurance companies and fraternal organizations is a condition which constantly exists. It would probably be surprising to a physician who is not connected with the home office of an insurance company to know how many physicians ask how they can secure an appointment as examiner. This desire on the part of doctors is a natural one however, as they realize in a more or less vague manner the benefits which accrue to a physician who has been appointed as examiner for one or more insurance companies or fraternal organizations. It is a recognized fact that there is a way for accomplishing everything, and in order that a physician may secure an appointment for any organization or corporation that requires his services, it is necessary that he proceed in the proper manner. Very few physicians know how to obtain these appointments with insurance companies in the accident, health or liability business or with fraternal organizations, and it is therefore the intention if possible, to point out how they can be secured in the quickest and easiest manner.

BECOMING WELL KNOWN: Successful physicians are men whose names and deeds are known to a great number of people and it is therefore imperative that a doctor makes his name known in the line in which he wishes to be employed; that is to say, if he wishes to build up a private practice, he must become well acquainted with the people among whom he resides. Should he desire to make examinations for insurance companies, it is necessary that he cultivate the acquaintance of men who are in charge of these companies or the individual who is in charge of the department which requires his services. If he wants to exam-

ine for a fraternal organization, he must pursue the same plan of putting his name forward among the class of people that go to make up these great organizations. Successful business men increase their business by advertising in the daily papers and in other ways, but as a physician is prohibited from getting his name before the public in this manner, he must use other methods which come within his creed.

PAPERS ON MEDICAL SUBJECTS: The writing of papers for medical journals on subjects pertaining to the practice of medicine and surgery, is one of the means whereby a physician can bring himself into prominence among his own professional associates, and this way is often adopted by a great many physicians to accomplish this purpose. All physicians are not capable, however, of writing original articles on medical or surgical subjects, but all physicians can report interesting cases which occur almost daily in their practice,—if they would only take the time and trouble. Doctors lose sight of the fact that many of their professional associates are pushing themselves forward in this manner; which is a proper and legitimate way.

PAPERS FOR INSURANCE JOURNALS: If a physician decides that he desires to make examinations for an insurance company, one of the best ways that he can become known among these corporations, is to write for insurance journals on medical subjects pertaining to life, accident or health insurance and write these papers in such a way that any one who has not had a medical education can read, understand and enjoy them. There are quite a number of insurance journals throughout the United States and almost without exception they would be willing and glad to accept an article on a medical subject, when that article is so written that all of their subscribers cannot only understand it, but derive benefit from it. It is imperative, however, that such a subject be considered in the plainest language possible and devoid of all medical terms. By writing for medical and insurance journals, a physician is able to bring his name more prominently before a large number of people than in any other way, and the more he writes, the more readable become his articles and a great number of people enjoy them, and gradually know the writer by reputation.

INFLUENCE WITH MEDICAL DIRECTOR: Appointments as examiner for an insurance company are often made because the doctor is personally acquainted with the medical director or other officer of the company. They are sometimes re-

ceived when the medical director is familiar with writings of the doctor which he has probably read in different medical or insurance journals, as a medical director must not only read medical journals, but must also spend more or less time in going over insurance publications. The more influence a physician can bring to bear with the medical director of a company or other home office official who has power, the quicker and easier will he secure an appointment as examiner.

INFLUENCE WITH AGENT: Acquaintance with an agent of an insurance company or with the general agent who directly represents the company is desirable, as in many cases insurance companies appoint examiners on the recommendation of their agents. It must be remembered, however, that a number of companies will not appoint a physician as examiner when recommended by the agent; therefore, in attempting to obtain an appointment from an insurance company, it is well to make inquiries as to how the medical director views a recommendation from an agent for the appointment of a certain doctor as an examiner. The agent himself usually knows how this subject is treated at the home office and can often give valuable information to a physician seeking an appointment. Many appointments secured by physicians as examiners for insurance companies are received through influence and whenever this method can be employed, it is one of the most successful ones. It is therefore important that doctors in attempting to secure an appointment, bring to bear all the influence they can in whatever manner possible with the medical director or the one who has the power of appointing.

WRITING MEDICAL DIRECTOR: When a physician is not acquainted with the medical director of an insurance company or any one in authority, he must use other means than influence in securing an appointment, and if he is located at a distace from the home office of a company, the only way that he can possibly get his name before the home office officials is by repeated letters in which he states his desire to represent the company as its medical examiner in the vicinity in which he resides. In attempting to secure an appointment as examiner through the method of writing the medical director, it is necessary that a follow-up system be used for this purpose. The sending of one letter to a medical director requesting an appointment is considered about as much good as one advertisement in a newspaper on any subject,—the value of which is practically nothing unless the adver-

tisement is followed up by the same one or changed repeatedly. It is therefore necessary when writing for an appointment to an insurance company that a number of letters be written and that each letter have a special object in view. This object of course, is the securing of an appointment but each letter must be worded differently and bring the purpose of the writer to the eyes of the medical director in another and entirely new way, if possible. When it is remembered that reports from physicians are required in their own handwriting, it can readily be seen that this writing should be the best that a physician can do; therefore, in writing letters to the home office for the purpose of securing appointments, physicians should be very careful of the manner in which the letter is written and also its composition. If the writing is poor and read with difficulty, it is almost a foregone conclusion that the writer will not receive an appointment, as the medical director is required to read a number of reports daily and he cannot afford to spend much time in reading reports from physicians who are such poor writers that more than the usual time is taken in reading them. The wording of the letters should be short and to the point and convey as much information in a few lines as it is possible to give. With this idea in view, the following set of letters have been prepared and may be used by physicians for this purpose. It being borne in mind that alterations, additions and omissions should be used whenever necessary. Letter number one represents the first letter of a series that can be sent to the home office of a company in an attempt by the doctor to secure an appointment as the examiner.

.....190

.....Insurance Co.,

.....(Address)

Gentlemen:—

Please consider me an applicant for the position of medical examiner for your Company in this city. I am.....years old, a graduate of the.....Medical College in .....and have had.....years experience as resident physician in the ..... Hospital before commencing the practice of medicine. My habits are strictly correct and I can give you a number of references if desired.

Trusting to receive a favorable reply, I am,

Yours very truly,

In the above it will be seen that the doctor writes a short letter, simply stating that he is desirous of being appointed as the examining physician of the company to which he writes, giving his age, college of graduation and years of experience, together with a few words about his habits and ability to furnish references. This letter is almost sure to bring a reply of some kind either from the medical director or from some other official of the company. This reply should be preserved and filed away as it indicates the person to whom in the future the following letters of the series must be forwarded. After waiting some weeks or months according to the desirability of the physician to be appointed as the examiner, another letter is sent to the same company and to the person who answered the first one. This second letter calls the attention of the company to the fact that the doctor has previously made an application for appointment and is still desirous of being considered should a vacancy occur; and can be written as per the following with some changes which may suggest themselves to the writer.

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Dr. ..... Medical Director,

.....Insurance Co.,

.....(Address)

My dear Doctor:—

Some weeks ago I wrote you requesting an appointmnet as medical examiner, but as yet have not received an appointment. If you are already satisfactorily represented here, may I ask that my application be placed on file and favorably considered at the first opportunity?

Thanking you for any courtesy extended and trusting to hear from you at your early convenience, I am,

Very respectfully,

After this letter has been sent and the reply received, it will be known if the official at the home office remembers the application of the doctor which was made some weeks or months previously. If the application has been forgotten, the medical director may ask for some information concerning the applicant. In which case, the doctor who is trying to secure the appointment will know that he is making some progress, at least in getting his name before the proper officials; and if he does not yet receive an appointment or some encouragement, he can write with benefit

to himself another letter to the company after several months have elapsed, and couched in the following or similar language.

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Dr. ..... Medical Director,

.....Insurance Co.,

.....(Address)

My dear Doctor:—

I wrote you some months ago requesting an appointment as medical examiner and was informed that you had no vacancies in this city. As vacation is approaching and many of our physicians are out of the city during the summer, I thought perhaps you might need a substitute and would permit me to serve you.

Trusting to have an early reply and thanking you for any courtesy extended, I am,

Respectfully,

In the above letter it will be noticed the intention of the doctor is to keep his name constantly before the medical director, using any excuse that circumstances may warrant. This letter may bring a reply of only a few words stating that the company is well represented and has no need of the services of the applicant. Such a reply should not discourage the doctor as he can rest assured that every letter that is dictated to him by the medical director has helped in bringing or keeping his name before this official and in time the medical director will know that such a doctor lives in such a locality and has been writing to him repeatedly for an appointment as examiner. Not having yet received an appointment, the fourth letter or one in which another pretence is used for writing can be sent to the company.

.....190

Dr. ..... Medical Director,

.....Insurance Co.,

.....(Address)

My dear Doctor:—

I beg to recall to your attention my letter of some months ago, requesting an appointment as medical examiner and to state that I am still an applicant for the position. If you have any intention of making a change in the near future, I should esteem it a favor if you will consider my application.

Thanking you for past courtesies and trusting to hear favorably, I am,

Yours truly,

Even this letter may not succeed in its mission but as before stated, the doctor is succeeding in getting his name better known at the home office and this may at some future time serve him in good stead. The writer should not be daunted by refusals or inability to secure an appointment from the company, it being taken for granted that he has written to a number of them, and that all of them will not have been found to be satisfactorily represented. It is therefore fair to assume that one or more appointments have been secured and the following or fifth letter is sent to the home office of the company which has not as yet appointed the doctor as its examiner.

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Dr. ..... Medical Director,

.....Insurance Co.,

.....(Address)

My dear Doctor:—

I am again writing you in reference to an appointment as medical examiner and trust you will not consider me too insistent, but I very much desire such work and as I am making more or less of a specialty of insurance examining, I thought you might desire to avail yourself of my services.

Thanking you for your uniform kindness in the past and trusting to have a favorable reply, I am,

Respectfully yours,

In the above letter it will be seen that the doctor informs the company that he is making more or less of a specialty of examining for insurance companies, and that he still desires an appointment from the company to which he is writing. This form of letter can be used and if desired, the doctor can name several companies of which he is the appointed examiner.

If an appointment has not been received after writing all these letters, a physician should not become discouraged, but should continue to pound away at the insurance company by writing whenever he has an opportunity, as sooner or later a vacancy with the company to which he has been writing will occur; and if he has previously kept his name before the medical director,

he stands a very good chance,—all other things being equal,—of being appointed the examiner and if appointed, he should at once on receipt of the letter of appointment, write the following letter of thanks.

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Dr. ..... Medical Director,
.....Insurance Co.,
.....(Address)

My dear Doctor:—

Your favor of the .....inst., stating that I had been appointed an examiner for your company is received and I beg to thank you very much indeed for the honor conferred on me. It will be my intention and ambition to render the company the best services that I am capable of and I trust they may always be satisfactory.

Again thanking you, I am,

Yours very truly,

This last letter requires little time, but by writing it, the medical director is assured that his new examiner is appreciative and again has the doctor succeeded in getting his name before his employer.

PERSONAL ACQUAINTANCE: It is said by some men that all favors extended in business, are extended through personal acquaintance or the desire of one party to help another, between which bonds of friendship usually exist. Whether this is true or not, it is always to the advantage of a physician that he extend his acquaintance, not only himself knowing a number of people but what is better, having them know him by reputation and personal acquaintance. It is therefore desirable and to the advantage of every physician who expects to do insurance work, that he take every opportunity of meeting the medical directors of the various insurance companies of the United States. It is of little concern to him if he is an examiner for the company which is represented by the medical director or not, but it is of course helpful to a physician if he is acquainted with the medical director of a company for which he has been appointed as examiner.

For the purpose of knowing these men personally, it is often necessary that a physician visit the home office of the companies to which he has made application for appointment or may do so at some future time. It is realized that physicians in certain parts

of the United States cannot become personally acquainted with home office officials, but physicians travel more or less, and during these times they should make every effort to become personally acquainted with officials connected with the home office of an insurance company or fraternal organization. Not only should the acquaintance be made with the medical director, but also with any other officials, as there is no telling at what time some one may be able to recall the name of a doctor who has made a visit to the home office and thereby throw a certain amount of influence in his favor. Physicians who live near the large cities and the home office of a number of insurance companies and fraternal organizations, should make it a rule to visit these offices two or three times each year, thus becoming known to the officials and employees connected there. It might also be said that these visits cannot be too frequent and neither can they when the doctor lives in the same city, or within a short distance of the office of the company which he represents or hopes to represent at some future time. If it is impossible to visit the home office of an insurance company, it should be remembered that the various accident companies hold conventions throughout the year, and at these conventions the companies are represented by their highest officers; therefore, if a physician will attend these conventions he will soon become well known to a number of officials connected with the home office force. This is also true of fraternal organizations, but in this case it is always necessary that the doctor be a member of a subordinate lodge of the fraternal society with which he hopes to become identified.

Accident insurance companies have formed two associations in the United States, the International Association of Accident Underwriters which meets once a year and usually sometime in July, and the Detroit Conference which meets semi-annually, first in one city and then in another. If a physician desires to attend one of these conventions, he can usually secure an invitation through a friend who is connected with a company represented or by means of the local agent, and when once secured, he can easily get letters of introduction to the officials of one or more companies and at the convention which he may attend, he will quickly become acquainted with all the representatives of the different companies.

Every opportunity should be taken by a doctor to become better acquainted in a business or social way with his employers who are represented by officials from the home office of an in-

surance company or fraternal organization. A doctor should impress his personality upon the officials of the home office of any company of which he has been appointed as examiner. There are a number of ways of accomplishing this purpose. He may do it by frequent calls at the office of the company and thereby become personally acquainted with a number of the employees or, if he lives at a distance and this method is impracticable, he can call attention to himself by the character of his reports which should be perfect in every way. A report which is of much value to an insurance company means that the examination has been promptly made, all the questions have been answered in an intelligent and concise manner, the writing is the best that the examiner can do and is easily read and any additional information that may be of value to the company is included in the report. Such a report is valuable to the company and the examiner as well, because the examiner soon earns a reputation at the home office as being a good man and his personality thereby becomes impressed upon the employees. Some examiners become better known to the medical directors of the different companies by writing a short letter with each report, giving confidential information or other facts which they cannot put in the report proper. Other doctors have a few words to say on a prescription blank conveying additional information and attach this blank to the report. Any little method or peculiarity that is not distasteful to the medical director or causes him to lose valuable time, will assist in accomplishing the aim desired. It is a standing joke in some offices that just as soon as a report comes from certain doctors, to ask if his prescription blank is attached to that report, or if a letter has been received in addition or a telephone message covering it. These little things may seem trivial, but at the same time an examiner who uses every means in his power to make his name better known at the home office, is the one who is known and recalled when an examination is desired or the name of a doctor requested by another company that wishes to make a new appointment and he is the one who receives the work or the appointment in almost every case.

After a physician has received an appointment as examiner, he must continue to keep his name and personality before the medical director and other officials of the company. If he does not, the appointment is merely an honorary one, for the reason that his name is lost among the large number of examiners who

work for the company and he therefore receives no examinations. He must continue to let the company know by every means in his power that he is the examiner and the one who wishes the examinations and by so doing he will usually be favored with them.

MUTUAL NEED: Physicians desire and need the work that is furnished by insurance companies and these companies are just as desirous of knowing and appointing good physicians as their examiners in different sections of the United States. If a company has no examiner in a certain section,—even though it may not have any business there,—the medical director does not know how soon the agency force will commence writing business in that locality; therefore, he is always on the lookout for responsible and qualified physicians and is ready and willing to appoint them in any part of the country, and when the company starts to do business in that section, he has his examiners already appointed and prepared to make examinations when called upon to do so. Physicians throughout the United States in requesting appointments as examiners not only benefit themselves, but also favor the different companies; and medical directors are always glad to receive letters asking for appointments, and usually they have what is known as a waiting list. This list is used for the purpose of keeping the names of physicians whose character and ability have been investigated and who are thought, would prove to be good examiners. If a physician cannot secure an appointment as examiner for a company, he can generally get his name on this list and by frequently calling the attention of the medical director to the fact that he is waiting for an appointment, often secure it when the first vacancy occurs.

APPOINTMENTS: The medical director is the one in almost all cases who has the power of appointing examiners, and he is the one whose acquaintance should first be cultivated and later on other members of the home office force if possible. A medical director often appoints an examiner at the request of some other official of his company and therefore it is well to know any official. Appointments that are secured from insurance companies which are not doing business in a locality in which the doctor is located, while not valuable in a pecuniary way, are very valuable in assisting a doctor to receive other appointments, as the majority of companies in sending out a letter of application for appointment as medical examiner, request the names of companies for whom the physician is examiner. If a doctor has been appointed examiner for one or more companies, he can state in his

application that he is the examiner for certain companies even though he has never done any work for them. The company to which he is applying will probably not know if their competitor is doing business in that locality or not, and the fact that the doctor is an examiner for one or more companies carries much weight in securing another appointment. It is therefore advisable that physicians get as many appointments as examiners for different insurance companies as is possible. When a doctor has been appointed as examiner for a fraternal organization, he stands in a different position in relation to insurance companies which usually regard a fraternal examiner as not as competent as he might be. This is undoubtedly an error in a great many cases, but does not alter the fact that such a feeling exists among the medical directors of different insurance companies. If a doctor, in applying for a position as examiner with an insurance company does not hold an appointment as examiner with another company, but does represent as examiner, one or more fraternal organizations, he will probably assist himself in stating this fact, rather than not making any mention of it, as by so doing he shows that he has had some experience in examining.

BUREAU OF INFORMATION: Accident insurance companies have a bureau to which is reported by every company a number of facts, and among these all companies report the names of satisfactory examiners. Therefore, if a physician is an examiner for an insurance company and has reason to believe that his work is satisfactory, it would be to his interest to write the company requesting that his name be recommended to the bureau of information so that he may receive requests for examinations from other companies. A number of companies send the names of their best examiners to this bureau, but whether they do so or not, it is to a doctor's advantage to make this request and later on, to know that it has been complied with. If his name is on this list, he is sure to receive examinations, and in many cases appointments as examiner for other companies that he might not otherwise be able to secure.

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